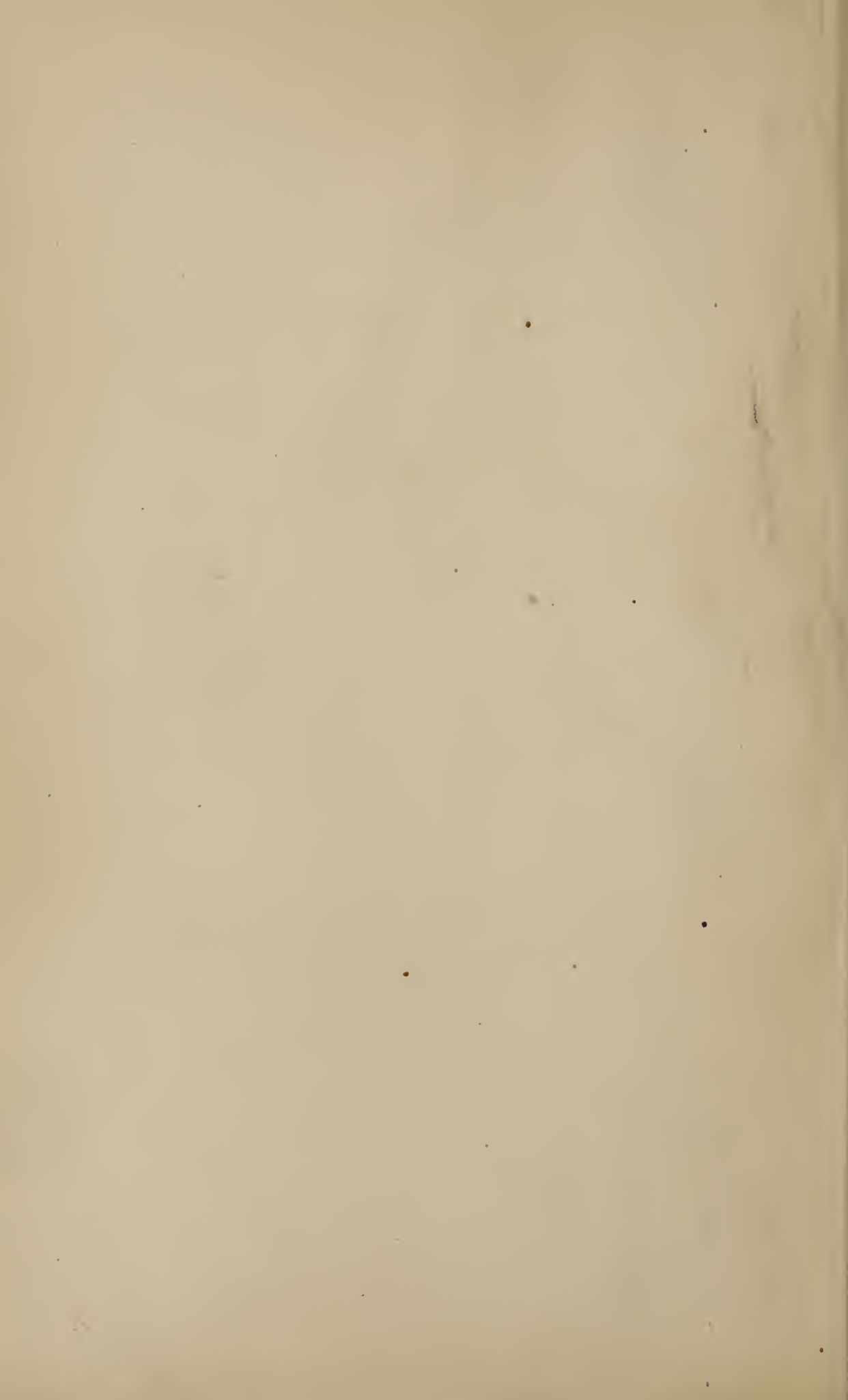


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PHOTOGRAPHIC REVIEW

OF

MEDICINE AND SURGERY.

A BI-MONTHLY ILLUSTRATION OF INTERESTING CASES,
ACCOMPANIED BY NOTES.

EDITED BY

F. F. MAURY, M.D. | L. A. DUHRING, M.D.

VOL. I.—1870-71.

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PREFACE.

THE PHOTOGRAPHIC REVIEW OF MEDICINE AND SURGERY having completed its first year, a few words explanatory of the enterprise are perhaps due to the volume.

The object of the publication has been to bring together some of the rare and interesting examples of disease occurring in our country, with a view of ultimately forming a valuable collection of photographs and records. The superiority of photography to other means for the portrayal of morbid structure is too well known to require any comment; while for the success which our undertaking has attained, the present volume must answer for itself.

It has been our aim to select the most striking and remarkable from the cases offered, especially those whose interesting points would admit of clear representation. The REVIEW has appeared in numbers every other month, each containing four photographic plates with accompanying notes and remarks.

Since the beginning of the work, the support of many prominent members of the profession throughout the country has been volunteered; and we feel sure that material to carry on the publication successfully will not be wanting.

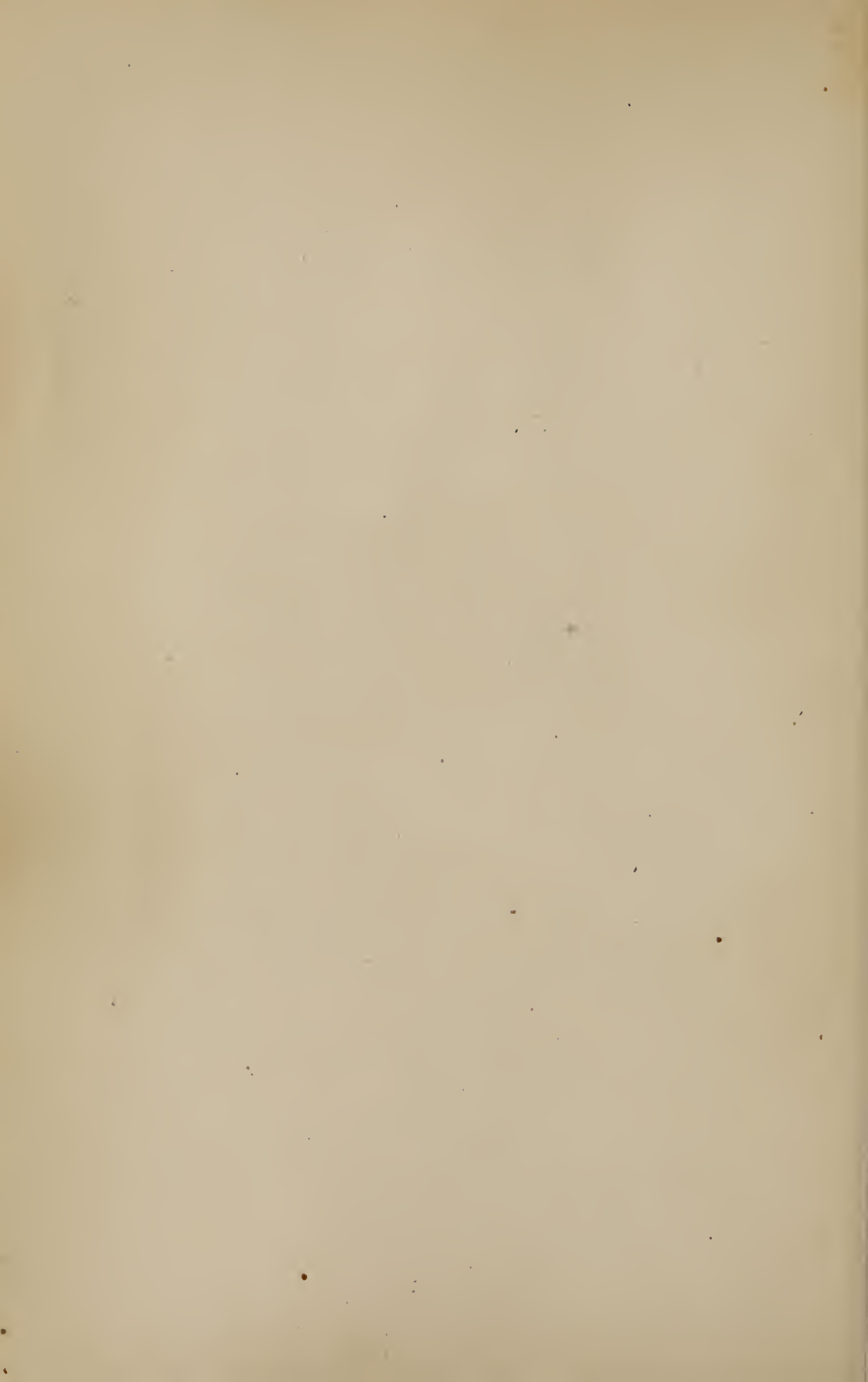
To those who have favored us with their valuable assistance we take the present opportunity of tendering our cordial acknowledgments.

F. F. MAURY, }
L. A. DUHRING, } EDITORS.



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PLATE I.

MULTILOCULAR HYDATID TUMOR.

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Clinical Remarks on a Multilocular Hydatid Tumor.

BY S. D. GROSS, M.D.,

Professor of Surgery in the Jefferson Medical College of Philadelphia.

THE case before us is that of John Gottlieb, æt. 54, a resident of Philadelphia, and a tinsmith by trade. He is a married man, father of a family, and has always enjoyed uniform health. About eight years ago he noticed a tumor growing on the inner side of the thigh, about three inches above the popliteal space. In a few weeks it attained the size of a fist, and remained so for seven years. Four months ago it began to increase, and now extends from the popliteal space to the pubes. It measures, in its greatest circumference, twenty-eight inches. The patient appears to be in the enjoyment of perfect health.

July 15, 1869. I passed a knife into the most dependent part of the tumor, and drew off thirty-five ounces of pus, looking very much like ordinary yeast. The opening was closed with adhesive plaster, and a bandage applied from the foot up to the pubes.

July 19, 1869. I laid the tumor open by an incision twelve inches long. It contained many cysts, each lined with false membrane and containing pus, the largest of these being about the size of a goose-egg. Near the upper portion of the wound and close to the pubes was a small cyst of the size, shape, and appearance of a testis. The lining membrane was two lines in thickness, studded with small gelatinous bodies, and there were also on the surface a great number of small cavities, or alveoli, which gave it a worm-eaten appearance. The alveoli were, for the most part, filled with the same transparent bodies resembling jelly. The microscopical examination, made by Dr. William Pepper, revealed small gelatinous bodies, presenting all

the characters of ordinary hydatid membranes and echinococci with their hooklets. The thick exterior sac was the adventitious one; the soft, large, central one, the parent cyst, contained an endogenous brood. The fluid in the adventitious cyst surrounding the true cyst was pus in a state of advanced fatty degeneration. The contents of the parent cyst were very fatty, and there was, in particular, abundance of cholesterin. This is undoubtedly a case of acephalocyst, developed in a very unusual situation, and in a broken-down, disorganized condition. The wound healed kindly, and the patient made a rapid recovery.

In conclusion, it is proper to state that the patient had been in the habit of eating pork for many years.

Meningocele.

BY D. HAYES AGNEW, M.D.,

Professor of Clinical Surgery in the University of Pennsylvania, and Surgeon to the Pennsylvania Hospital.

THE little patient represented in the above photograph is now eight months old, is a male child, and in the enjoyment of very good health, save the congenital deficiency in the bones contributing to the formation of the posterior fontanella. The development in every other respect is not in any way inferior to other infants of the same age. The mother states that her babe nurses well, is at times bright and lively, but has attacks of crying, which continue sometimes almost the entire night. The enlargement is soft, covered with a light growth of hair, and not unlike other portions of the scalp. When pressed it does not appear to produce any pain, but when moved from side to side it always provokes some fretfulness. It seems to consist of the ordinary integuments of the scalp, and the membranes of the brain distended with the subarachnoid fluid. It is pedunculated in form, and measures ten and a quarter inches in its greatest circumference, and eight and three-eighths inches in its greatest longitudinal diameter.

Fifteen days after birth I placed an elastic ring of rubber around its base, so as to make gentle but persistent pressure, and, after about two weeks, replaced this with a still smaller

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PLATE II.

MENINGOCELE.

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PLATE III.

HORN Y TUMORS.

ring, and so diminished the size from time to time, until, finally, one portion of the base became sore, rendering it necessary to suspend treatment for a time. The parts having healed, I resumed the compression of the pedicle by applying a ribbon of lead, tightening it a little every week. The pedicle has been reduced in circumference by this method almost one-half. It is hoped, by continuing the constriction, aided by the development of the cranial bones, it may be reduced to a mere cord and admit of removal.

Horny Tumors—*Cornua Cutanea*—Horny Excrescences —*Cornes de la Peau*—*Production Cornée*.

BY WM. H. PANCOAST, M.D.,

Demonstrator of Anatomy, Jefferson Medical College, Surgeon to the Philadelphia Hospital,
and Surgeon to Charity Hospital, etc.

THE accompanying photograph is that of Capt. Levi Becket, a resident of Atlantic City, New Jersey. The horny tumors were photographed on his face by simply tying them on in the position from which they fell, he having come to me with them in his hand.

When he visited me at my office, on the 27th of last June, his face was in a horrible condition. The whole skin of the nose and cheeks, and a portion of that upon the forehead and lips, was covered with horny sores,—the one involving the left cheek, from which the large horn had fallen, being offensive and heaped up with horny scabs.

The patient states that he is 78 years of age, has lived most of his life in the open air as a fisherman and gunner, his health generally good, with the exception of some three or four successive and severe attacks of erysipelas, produced, as he presumes, from exposure to the sun and wind. The last of these attacks he characterizes as malignant.

According to his statement, and that of his daughter and son-in-law, the horns, after this last attack, began to grow upon the nose and both cheeks, and first appeared in the form of small

warts, about six years previous to the date of this report. No special treatment was resorted to further than pulling off the warts and applying some herb washes.

The horns continued to grow and the affection to spread over the face until about the fourth year of its duration, when the base of each of the two larger horns began to ulcerate, causing them, as he expresses it, to "rot off." The surfaces from which the horns fell became open ulcers, covered over and filled up with horny scabs.

I admitted Capt. Becket as a pay patient to the wards of the Philadelphia Hospital. Placed him under a supporting treatment, and, at the end of three days, I scraped off the scabs before the Clinical Class, and touched the raw surfaces freely with the crystals of the chloride of zinc. This I applied over nearly the whole face, scraping away the altered epithelium with the handle of the scalpel, and rubbing on the zinc.

This was the treatment excepting in regard to the ulcer, which had been the base of the largest horn on the left cheek. There the disease had been so severe as to destroy the superficial fascia, making a large, circular ulcer, not movable with the skin, two inches in diameter (having the appearance of an epithelial cancer), which involved the periosteum of the superior maxillary and malar bones as far up as, and for the whole breadth of, the lower margin of the orbit. Here I had to use the edge of the scalpel freely, cutting off and scraping away the unhealthy granulations down to the bone.

The zinc application was repeated three times, the last two, on account of the pain produced, while the patient was under the influence of ether. Subsequently it became necessary to give him full doses of morphia to ease his suffering, and a solution of lead-water and laudanum was applied over the face. As the patient, though much benefited by these operations, declined to submit to them again, I applied the following caustic paste, spreading it over the surface, and leaving it on for a day :

R.—Zinci sulphat. exsic. $\mathfrak{z}\text{i}$;

Aq. ext. opii as much as will saturate 1 oz. of water ;

Wheat flour enough to make a paste, and then add zinci chloridi $\mathfrak{z}\text{ii}$.

This application gave very little pain, and was very efficacious.

He continued to improve, both in respect to his health and the general condition of his skin. Two ulcers only were left requiring active treatment; one apparently almost cured, and the other, the worse one, on the left cheek involving the periosteum, much healthier. On the 18th of August, impatient of hospital restraint, he returned home. I heard from him on the 30th of September. He was at home, enjoying his usual open-air life, with his condition much improved. As I consider the ulcer last mentioned to have taken the form of epithelioma, I have fears for an unfavorable result through the patient's unwillingness to submit to further treatment.

Horns and horny plates are developed upon the skin and mucous membrane, but more commonly on the skin, and most often on the head; next on the thighs, their inner face, and occasionally on the trunk, buttocks, and limbs. Sometimes they spring from the epidermis lining the interior of an hypertrophied sebaceous follicle, and become prominent after the opening of the cystic cavity; sometimes from the mucous membrane of the tongue, where small horny growths are by no means uncommon, and again from the prepuce and glans penis; these parts being much exposed to irritation.

Horny growths on man, in their mode of development and nature, seem quite akin to the horns of animals. Even when burned they give forth the same odor. I scarcely think it possible to confound these growths with any other morbid production, although it is well known that epithelial cancers accumulate upon their surface yellow or brown crusts, which occasionally acquire considerable size and prominence.

The larger horny productions are themselves without sensibility, but from their prominence they are exposed to shocks which excite irritation and pain, liable to be followed by suppurative inflammation at their base, so as to be readily detached. Ingrassias says that he saw at Palermo a young girl whose body was covered, but more especially the knees, head, forehead, arms, and hands, with horny excrescences, bent and pointed. They had existed for many years, and were increasing. He says he cured them in a few days, but, unfortunately, does not mention by what means.

Fabricius speaks of a young girl of the Canton of Berne,

whose back and limbs were so covered with horny vegetations as to prevent her from standing upright, from walking or sitting, or lying on her back, without great suffering. She finally fell into marasmus and died.

Alibert mentions the extraordinary cases of the two brothers Lambert; their bodies were covered with horny excrescences, with the exception of the face, the palms of the hands, and the soles of the feet. They were often obliged to cut those in the region of the tendo-Achillis on account of their rapid growth. These two brothers (he says) moulted or shed these scales periodically with the equinoxes every spring and autumn.

Horns grow sometimes to a considerable length. Dumonceau describes one eleven inches long and three inches at the base. Sir Everard Home refers to one of the same size. J. Cloquet reports one that he saw upon the forehead of an aged female which measured at the base six to seven inches, and five in height. In the *New York Medical Repository* for 1820 is quoted a case of horny growth which was fourteen inches in circumference at its base, and consisting of three branches. (*Gross.*)

I have a model in my cabinet, which is said to have grown from the forehead, curving downwards over the face. It is sixteen and a half inches long, and two and a quarter inches in diameter at the base. It is generally stated that these horny tumors are movable with the skin; but in certain regions, as the head, where the superficial fascia is comparatively thin, the horns sometimes become immovable, in consequence of inflammation involving the cellular tissue, and, as in the case I have cited, the periosteum. The spontaneous shedding of these horny growths, in the cases given, were very seldom followed by a cure. These productions occur most generally in the aged, but the young are not exempt. Women are said to be more subject to them than men, but this is doubtful, for according to Villeneuve's statistics, in seventy-three cases where the sex is indicated we find there were thirty-seven women and thirty-six men. Yet those cases in which the horny growth has been general, the victims have been young women. Professor Gross (*System of Surgery*) says it appears to occur with equal frequency in either sex.

But three cases of large horny growths have come under my observation ; of these, two were men. In sixty cases collected by Demarquay, thirty-one were women, nineteen were men ; of the ten others the sex is not mentioned. Social condition appears to affect their development, as they are most frequently found among the lower classes.

Local irritation seems very often to have been the cause of their formation, such as bruises, contused wounds, burns, and, as is possible, from the case I have reported, erysipelatous inflammation. They may occasionally be hereditary, as in the cases of the brothers Lambert, where the malady was transmitted through three generations, but only from male to male.

PATHOLOGY.

It is generally believed that horny growths most often take their origin from the epidermis lining a sebaceous follicle. One variety of horn is, however, described as consisting of epidermis more or less condensed and desiccated, covering a fibrous papillary core well supplied with blood-vessels. Another variety of horn is said to grow on a vascular matrix, which is flat and very slightly projecting above the level of the skin.

TREATMENT.

I am led to believe that when the epithelial degeneration is slight, it is best to scrape it off with the handle of a scalpel, or, if it comes in the shape of warts, and they are small, to dig them out as thoroughly as possible, and then apply the chloride of zinc freely to the wound, controlling the subsequent inflammation with suitable lotions. If the horn is large, I would make two elliptical incisions around its base, through the healthy skin, if possible, so as to remove all the diseased structure, drawing the lips of the wound carefully together and dressing simply.

If the periosteum be involved by the deep ulceration, I would treat it as I have described in the case reported above.

Keloid Tumor.

BY F. F. MAURY, M.D.,

Lecturer on Venereal and Cutaneous Diseases in the Jefferson Medical College, and Surgeon to the Philadelphia Hospital.

FREDERICK JOURDAN, colored (formerly a slave), æt. 28 years, admitted to the surgical wards of the Philadelphia Hospital, May 26th, 1870. Is a native of North Carolina; he is above the ordinary height, of large frame, and very muscular. His family history revealed nothing from which to trace the cause of his disease. Thinks his father had two small tumors, one under the chin and the other on his side, both of which gradually disappeared before his death, the cause of which he does not know. Mother and brothers alive and in good health.

When eight years of age a small abscess made its appearance on the anterior part of the neck, which, on being opened, discharged an ounce of pus. As the result of this abscess a well-marked induration followed at the original seat, which gradually extended in both directions around the neck. After nine years' growth it had half encircled the neck, and was about two inches in width. Professor N. R. Smith, of Baltimore, at that time removed the growth. The resulting wound healed kindly in six weeks. The line of the cicatrix, however, was speedily occupied by a hard, rounded ridge, which slowly extended and enlarged. Eighteen months later, an accidental wound was inflicted by an axe on the posterior part of the neck. This wound also soon presented a hard, nodulated cicatrix, which crept around the neck to join the one from in front.

His master now carefully avoided punishment, as the least incisions seemed prone to take on this morbid action. Four years after this date a band of soldiers whipped him severely; each gash on healing was succeeded by the hard, elevated ridge, the result of the previous wounds.

Seven years subsequent to Dr. Smith's operation, the tumor was again removed, at which time it had extended around the entire neck. Three months were occupied in the healing of the wound, which also assumed the same morbid action.

At the present time there are thirty-seven tumors of vari-

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PLATE IV.

KELOID TUMOR.

able size. The large one resembling, in a marked degree, the ruffles worn in the time of Queen Elizabeth. The two original growths are now thoroughly blended and form one solid mass, touching at the posterior part of the neck. It measures twenty-eight inches in its greatest circumference, and five inches in its perpendicular diameter. It is plicated, and has deep fissures separating the folds, from the bottom of which is exuded a thin, yellowish, offensive fluid. The skin is intact, not having undergone ulceration. There is little or no elevation of temperature, no pain when pressure is instituted, it being only painful from the weight. The entire mass can be moved without difficulty, thereby indicating only a cutaneous attachment. The sensibility of the skin is perfect, the presence of a fly being at once recognized.

The other tumors are situated on the back and right arm, and vary from the size of a pea to that of a medium-sized tomato.

In July, 1870, two of these growths were removed for the purpose of microscopical examination, and also to observe the rapidity of recurrence. For one the ecraseur was used, for the other the knife; in both instances a portion of healthy skin tissue was removed. At this date, almost three months afterward, there is a well-marked tendency to the development of new growths in the same place.

The following careful microscopical examination was kindly made by Dr. L. A. Duhring:

"To the naked eye, upon section vertically through the tumor, the cut surface presented a structure close and compact in appearance, of a yellowish-white color. To the touch it was tough, resisting, and firm, with a certain amount of elasticity, and upon pressure exuded a thin, pale-straw colored liquid."

MICROSCOPICAL EXAMINATION.

"After being prepared in solution of bichromate of potassa and alcohol, vertical sections were made and examined in glycerine. The horny layer of the epidermis was thin and scanty, the cells themselves being well broken up, and many of them having undergone granular degeneration. The cells in the

upper layer of the rete mucosum seemed closely packed together and unusually numerous, while the deeper layer contained the pigment cells well colored.

"The mass of the tumor was composed principally of connective and elastic tissues, the former being disseminated throughout, while the latter appeared here and there in the form of good-sized, well-developed elastic bands, running both transversely and vertically. Fat was found in some parts in fine globules. Long, wavy bundles of connective tissue were seen running in striæ transversely, just beneath the papillary layer. Here and there a cut sebaceous gland was found.

"In some of the fields a loose network of connective and elastic tissue intermingled, was present, with globules of fat. Connective tissue cells, long and twisted, were to be seen, sometimes approximating each other and again scattered."

REMARKS.

As respects the nature of this affection little doubt exists in my mind. Although not strictly corresponding to the keloid of Alibert, nevertheless its history, physical appearances, and microscopical nature undoubtedly place it with that group of tumors that modern pathologists denominate keloid. Professor Gross, in his work on Surgery, vol. i. p. 583, describes this affection.

The error into which one would readily fall exists in the name, inasmuch as a keloid formation is generally accepted to be a tumor crab-like in appearance, and resulting frequently from operative interference with other tumors; but at the same time a "keloid diathesis," as it were, may exist, where the least incision into the skin is surely followed by this abnormal condition, then the growth does not present the peculiar appearance which has procured for it this name. As for example, in the present instance, each gash of the lash has been replaced by a tumor resembling a tomato in shape and pediculated, yet careful microscopical research reveals nothing except a fibroplastic element common to other formations. Whereas the history of the case, the physical condition, and collateral evidence will do much to establish correct facts.

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PLATE V.

HYPERTROPHIED CLITORIS.

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Hypertrophied Clitoris—Fibro-Cellular Outgrowth..

BY FREEMAN J. BUMSTEAD, M.D.,

Professor of Venereal Diseases at the College of Physicians and Surgeons, New York, etc.

CAROLINE MEYER, German, æt. 24, was admitted into Charity Hospital, Blackwell's Island, in January, 1868.

She reported that, three years before, she contracted a chancre upon the right labium majus, which was cauterized. In spite of reiterated questions, she affirmed that she had never had any eruption until three weeks ago, when the present eruption—one of ecthyma—appeared upon the scalp, face, arms, and breast. Cicatrices, however, of an older eruption were found upon various parts of the integument, and of what were probably condylomata in the neighborhood of the genital organs.

A year since an enlargement appeared at the upper commissure of the vulva, and continued to increase until two or three months ago, when it became stationary. The growth is larger or smaller, according to the length of time she has been standing or sitting. It is never painful except in warm weather, when it becomes excoriated and sore.

On examination there is found a tuberculated, lobulated tumor, attached to a pedicle, which is evidently the hypertrophied clitoris. Indeed, on turning the tumor upwards towards the abdomen, the two corpora cavernosa of the clitoris, separated by a longitudinal furrow, are beautifully seen. The growth is attached to the right labium minus. The left labium minus is pierced with four openings or slits, varying in size, the largest admitting the passage of two fingers. How these originated I do not know: there is no history of any ulceration except the chancre three years ago; and the integumental surface of the tumor and its neighborhood is everywhere intact.

Both labia minora and majora are generally hypertrophied. There is no line of demarcation between the tumor and the surrounding healthy tissues.

The clitoris, surmounted by the lobulated mass, protrudes from between the labia, and is three inches in length; is pendent, and never becomes erect or turgent. The vagina is filled with acuminate (simple, non-specific) vegetations. The lobulated mass measures six and one-quarter inches in circumference.

February 1. The patient was etherized and the growth, including the labia minora, removed. The flow of blood was considerable, but was easily arrested by the application of the perchloride of iron.

The patient soon after left the hospital, and her subsequent history is unknown.

The microscopical examination of the tumor, for which I am indebted to Dr. J. G. Curtis, reveals the same to be entirely fibro-cellular.

It is hardly necessary to say that this tumor was by no means directly due to syphilis; but it is an interesting question how far venereal lesions in the neighborhood of the genital organs may indirectly result in such outgrowths, in the same manner as they are known to produce thickening and hypertrophy of the prepuce in the male, of the labia in the female, and that form of stricture of the rectum improperly called *syphilitic*.

Among those authors who have treated of tumors of this nature, I would refer especially to Förster, "Handbuch der speciellen Pathologischen Anatomie," p. 465, and to Paget, "Lectures on Surgical Pathology," third edition, London, 1870, pp. 458 and 467.

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PLATE VI.
FIBRO-CYSTIC TUMOR.

Fibro-Cystic Tumor, Multiple Cystic Tumor, or Cystomatous Sarcoma of the Perineum—Urinary Abscesses and Fistules from Chronic Stricture of the Urethra.

BY S. W. GROSS, M.D.,

Lecturer on the Diseases of the Genito-Urinary Organs in the Jefferson Medical College, and Surgeon to the Philadelphia Orthopedic Hospital.

NUMEROUS instances of congenital, multilocular cystic tumors, occurring in the connective tissue of the neck, axilla, and buttocks, have been recorded, and similar formations in the perineum have been observed by Wernher, Otto, Von Ammon, and Henke, in which the solid element predominated over the cystic. It would appear, however, that such growths are uncommon in adult life, and the only example I have ever met with forms the subject of the following remarkable case. The terms fibro-cystic tumor, multiple cystic tumor, or cystomatous sarcoma, as proposed by Professor Virchow, clearly denote its composition, it being formed of an admixture of a great number of circumscribed cavities or cysts, of varying size, and containing a serous fluid, either clear, or discolored by blood, and of a solid element, which is a species of connective tissue.

I was consulted in July, 1870, by a shoemaker, 58 years of age, whose perineum presented a most grotesque appearance. Dependent from the right side of the anal perineum hung a tumor of fifteen years' standing, which was ovoid in shape, with a broad attachment, and measured around its largest circumference eight inches and seven inches antero-posteriorly. It was painless, freely movable, and covered by healthy integuments, which were dimpled above, while its surface was somewhat irregular, rather than finely lobulated. To the touch it was unevenly elastic, and, in parts, soft and compressible, imparting a sensation of both fluid and solid, and resembling a fatty or nevoid growth. Prolonged from the base of this pendulous mass forwards for three inches towards the scrotum, and confined entirely to the right half of the urethral perineum, was a continuation of the growth, into the composition of which less of the fibrous element apparently entered, as it was soft, elastic, and fluctuated. Through the agency of this continuation and

inflammatory exudation the perineum was deformed, its natural landmarks were effaced, and the raphé pursued a zigzag course towards the left side. Exploration with the grooved needle detected the presence of a clear fluid.

The subject of this case had gonorrhœa, which lasted for several months, twenty-five years ago, which was followed, in five or six years, by urethral stricture, with all of its concomitant symptoms. Within the past few years the stream of urine had greatly diminished in size, the act of micturition was prolonged and attended with great straining, and he had suffered from several attacks of retention of urine, which were relieved by the ordinary measures. In February, 1870, abscesses began to form in the scrotum, and the resulting sinuses have remained fistulous. When he consulted me, he was broken down and emaciated; he suffered from frequent rigors, and was much troubled with vesical irritability. The genital organs were in a state of active inflammation. The prepuce was the seat of solid œdema, and the meatus could be brought into view with difficulty. The scrotum was red, glazed, of an erysipelatous appearance, much thickened and tender on pressure, and the seat of an abscess and three fistulous openings to the left of the median raphé. Another opening existed at the root of the penis in front of the pubic symphysis. From these orifices there was a constant discharge of pus, as well as of urine, during micturition. The man was suffering from internal and external hemorrhoids, and the prostate gland was so much enlarged as to almost fill the pelvic outlet. The urethra was rough and the seat of false passages, and a tight stricture commenced four inches from the meatus. There was a free discharge of pus by this outlet, and the urine contained an abundance of the same deposit.

In view of his bad condition, operative interference was deferred until his health became improved. When I again saw him, in the middle of September, his condition, both general and local, was much better. He was in good spirits, his appetite was very fair, the irritability of the bladder had diminished, and he suffered less from rigors. The prepuce could now be retracted, but several abscesses, followed by fistulous orifices, through which pus and about one-sixth of the urine escaped, had formed. The entire number of openings was nine, one

being seated at the root of the penis, five in the scrotum, and three in a fungous-looking mass behind the scrotum. Into some of these orifices, a small, soft bougie could be passed for four inches. An abscess existed in the scrotum, which was freely opened, and the perineum was immensely thickened and indurated by inflammatory deposits.

On the 21st of September, external urethrotomy, upon a guide, was performed, the incision extending through the posterior portion of the scrotum nearly to the anus. The perineum was very deep and vascular, and, from the inability of the divided vessels to retract in the indurated tissues, the hemorrhage was free; but it was finally controlled by including the structures in which they were seated between curved needles and silk threads, and by plugging with cotton wrung out of a dilute solution of subsulphate of iron. For the first few days the patient did well, but bed-sores formed, pyæmic symptoms set in, and death ensued on the 3d of October. A post-mortem inspection of the body was refused.

In connection with this case I may mention that, through the courtesy of Dr. J. A. McArthur, of this city, I had recently an opportunity of seeing an example of simple cystic tumor developed in the connective tissue of the perineum of a man, 35 years of age, who had formerly been a private in the 18th Regiment Pennsylvania Cavalry. He first noticed a swelling of the size of a pea, anterior to the anal aperture, four years ago, which has steadily increased to the volume of a pullet's egg. It occupies the centre of the perineum, and projects backwards towards the anus. It is ovoid in shape, translucent, with thin, vascular integuments, elastic, and fluctuates. Its contents are like ordinary serum.

Complete Simple Luxation of the Astragalus forwards and inwards—Excision of the Bone—Recovery with a Useful Limb.

BY JOHN H. BRINTON, M.D.,

Surgeon to the St. Joseph's Hospital, Surgeon to the Philadelphia Hospital, and Lecturer on Operative Surgery in the Jefferson Medical College.

ON the morning of October 20, 1868, Mr. L., of South Carolina, æt. 75, fell through a trap-door into a cellar about nine feet deep, striking the rounds of a ladder in his fall. He was unable to rise, and was carried up the ladder on the back of a man. A neighboring physician was called in, a dislocation of the ankle pronounced, and reduction under ether attempted. This failing, the limb was temporarily dressed, and the patient was sent in a carriage to his residence in the country some ten miles distant.

At ten P.M. of the same day I saw Mr. L., in consultation with Dr. Moss, and recognized a complete luxation of the astragalus forwards and inwards. The integument was untorn, but was tensely stretched over the head of this bone and over the inner malleolus, which latter appeared very prominent from the displacement of the astragalus. The foot below the scaphoid and cuboid bones was markedly everted. The fibula was fractured transversely about one inch above the external malleolus. The patient was again etherized, and powerful attempts made to reduce the luxation, but so tightly locked were the bones that no change whatever was effected in the position of the parts. Operative interference being at this time absolutely contraindicated by Mr. L.'s condition, the limb was placed in a bran-box, and stimulant and opiate remedies administered.

On the following morning inflammation of an erysipelatous character set in, extending up to the knee. The dorsum of the foot was greatly swollen, and of a dark-purple color, but the pulsation of the dorsalis pedis artery remained good. This local condition continued for several days, during which time the patient remained tolerably free from pain and fever, with a good appetite and in good spirits. By the twelfth day after the accident the inflammatory condition of the leg had in great part

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PLATE VII.

EXCISION OF ASTRAGALUS.

disappeared; but at this time the constitutional symptoms became threatening, and a slough commenced to form over the head of the astragalus.

On the fourteenth day, in consultation with Drs. Moss and Lynah, I excised the astragalus by a longitudinal incision. The removal of the bone was accomplished without difficulty, its ligamentous connections having been in great part severed by the violence of the accident. The tendons of the *tibialis posticus* and *flexor longus pollicis* muscles were ruptured and in a sloughing condition.

The patient after the operation did remarkably well, thanks to the unwearied solicitude of his attending physician, Dr. Moss, his own unflinching courage and determination, and the care with which he was nursed. The limb was placed in a swinging bran-box, the open joint was largely injected with solutions of permanganate of potash and of carbolic acid, and the free exit of all discharges was carefully provided for. At the expiration of twenty-five days from the operation, all of the exposed cartilages had softened and had been taken away, and healthy granulating surfaces were established. A little later, the superficies of the posterior part of the *os calcis* became carious and was removed. During February, 1869, the discharge from the ankle-joint gradually diminished in quantity; at the same time rapid cicatrization took place. A splint formed of bandages saturated with a solution of silicate of soda was now applied, but so great was the congestion of the limb when bandaged, or when placed in the dependent position, that the splint could not be tolerated, and was therefore dispensed with. This tendency towards swelling and discoloration decreased with time, cold applications, and friction, but no sustaining apparatus to the limb was ever used.

In April, 1869, Mr. L. began to walk with crutches, but these were soon exchanged for a walking-stick. At present (November, 1870) the wound is solidly closed, the heel is elevated about one inch and three-quarters, and the foot presents the peculiar double curve exhibited in the photograph. A slight degree of motion exists at the ankle-joint, and the extremity, although shortened, is firm and capable of sustaining the weight of the body without pain. He now walks comfortably with the aid of his cane alone and wearing a high-heeled laced shoe

without metallic supports. As evidence of the power yet remaining in the ankle, I may state that, unassisted and without either crutch or stick, Mr. L. mounted to the third story of the gallery in which the accompanying photograph was taken.

REMARKS.

In examining the recorded cases of complete simple luxation of the astragalus I have been struck with the different opinions entertained as to the proper treatment of the accident. Most surgeons agree as to the propriety of an attempt at reduction, although from this opinion Nélaton dissents, on the ground that in this injury the attachments of the astragalus are destroyed to such an extent as to involve the life of the bone. Dr. Gross advises immediate excision; Dr. Norris,* primary excision, if reduction be impracticable. Mr. Erichsen recommends the attempt at reduction, accompanied if necessary by section of the tendo-achillis; if reduction be impossible, then a secondary excision, which in his opinion is safer than the primary operation. Streubel, who has laboriously examined the literature of this injury, favors first an attempt at reduction; if that be unsuccessful, then an expectant treatment, to be followed if necessary by secondary excision. Such, too, are the conclusions of Turner† and of Broca.

In the judgment of the writer, all attempts at reduction should be made with as little violence as possible, and should be of short duration; a secondary resection, moreover, would seem to be less dangerous than a primary one, and should be preferred. The following statistics are pertinent to this subject: Streubel‡ reports fifty-seven cases of primary excision of astragalus, with forty-one recoveries, and twenty-five secondary excisions, with one death. Hyfelder gives sixty-seven excisions, with nine deaths. Mr. Hancock§ collects twelve cases of excision performed by British surgeons for complete simple dislocation of astragalus, with nine good recoveries and three deaths; and

* Amer. Journ. Med. Sci., Aug. 1837.

† Trans. Prov. Med. and Surg. Assoc., vol. xi.

‡ Schmidt's Jahrb., Bd. 139, Aug. 1868, p. 206.

§ Lancet, vols. i. and ii. 1866.

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PLATE VIII.

HYPERTROPHIC TUMOR.

twenty cases by foreign surgeons, with fourteen recoveries, three deaths, and three doubtful results. The greater rate of mortality in all the statistics accompanies the primary excisions.

Hypertrophic Tumor of Integument of Forehead, Eyebrow, and Eyelid.

BY R. J. LEVIS, M.D.,

Lecturer on Ophthalmic Surgery in the Jefferson Medical College, Surgeon to the Wills Ophthalmic Hospital, and late Surgeon to the Philadelphia Hospital.

NICHOLAS CONRAD, æt. 30, has a tumor of simple hypertrophic character, involving the integument of the left side of the forehead, eyebrow, and eyelid. The surface is irregularly lobed, but the skin maintains its normal characteristics of color, sensibility, and elasticity, and blends gradually with other portions of the cranial integument. The whole enlargement differs from the surrounding integument only in its hypertrophied and lobed character.

The development is greatest in the eyebrow and eyelid, the brow overhanging the cheek, and the eyelid resting on the ala of the nose.

The cranium in the left frontal region is depressed beneath the mass, the apparent excavation being due to the mechanical effect of pressure.

The tumor appears to be congenital, as it was noticed at his birth as a small protuberance on the left temple, which has ever continued to increase. At the age of fourteen years, the left eye, in which vision had been normal, began to be obscured by the growth of the brow and lid.

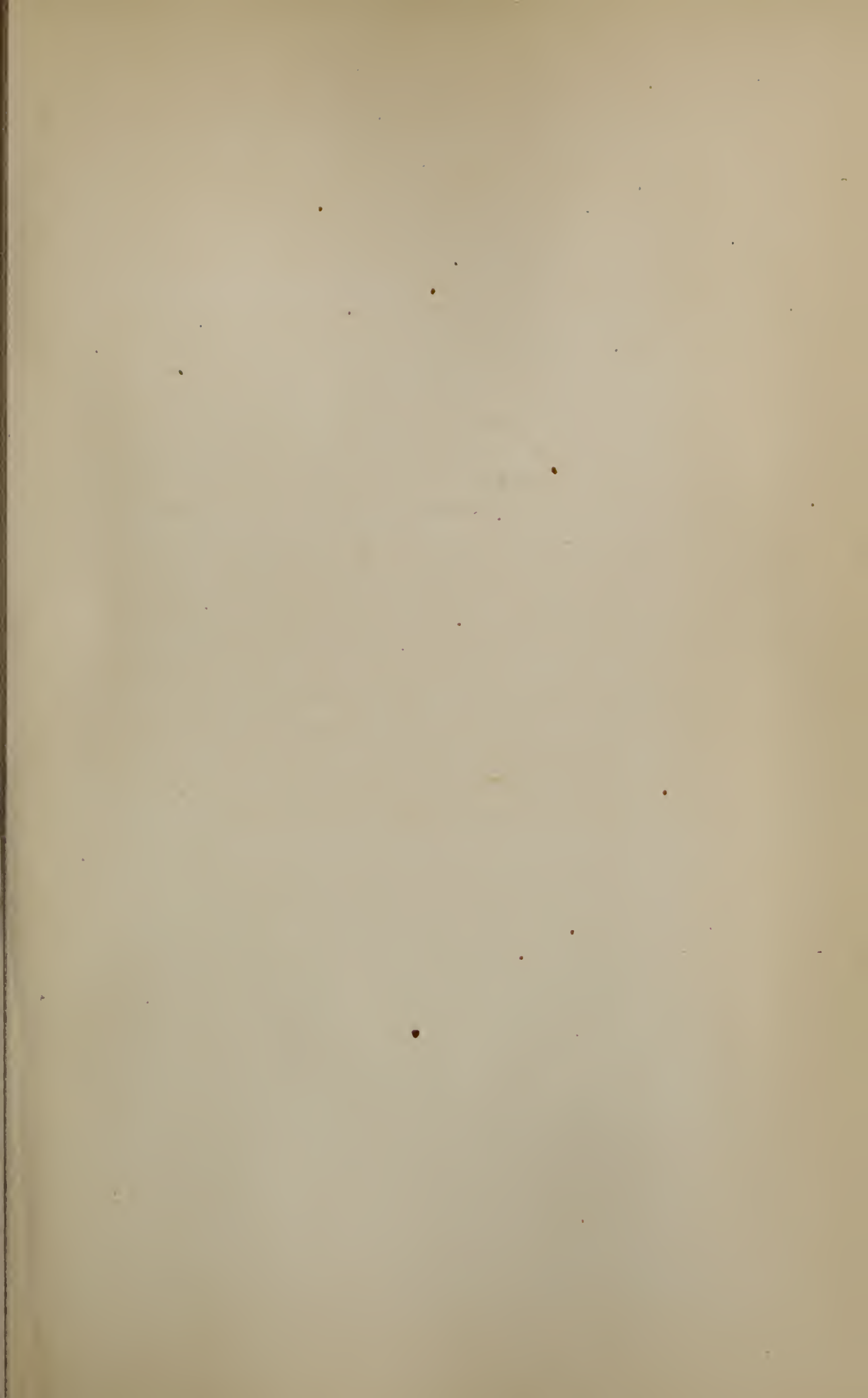
On elevating the left eyelid, the eye is found to be atrophied and cataractous, without perception of light. The atrophy is probably due simply to long-continued pressure and loss of the function of vision from obscuration. He suffers from slight photophobia in the other eye, but its vision is otherwise unimpaired.

The general health of the patient is good, but his intellect is naturally obtuse, and he is spiritless, inactive, and indolent.

The only available treatment would be partial removal of the redundant integument, for the purpose of checking the inconvenient development and improving the patient's appearance; but, in consideration of his indifferent mental condition, no operative interference is advised.

The tumor is, pathologically, a fibro-cellular outgrowth, and is analogous to such cutaneous hypertrophy as is classed under the head of elephantiasis. It is, in this case, remarkable on account of its peculiar location, great size, and its congenital origin. In its lobed character it most resembles elephantiasis of the scrotum, but the tumor is less circumscribed than the disease as I have seen it in that locality, and it blends insensibly with the surrounding integument, rather as in elephantiasis of the leg.

The cause of this abnormal development cannot be determined. Cutaneous hypertrophy or outgrowth has usually its origin in inflammation, and the position of the part affected is generally pendent, inviting blood to it and suffering from its hydrostatic pressure, distending the veins and impeding the function of the lymphatics. Such pathological influences certainly exist in the leg and in the scrotum, the most frequent location of hypertrophic cutaneous development. In this tumor no such incitement to growth exists, and no local or general irritating influences appear to bear upon it.



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PLATE IX.

EXSECTION OF HIP-JOINT.

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Exsection of Hip-joint; Reproduction of Bone to nearly the Normal Length; Recovery with Perfect Motion.

BY LEWIS A. SAYRE, M.D.,

Professor of Orthopedic and Clinical Surgery, Bellevue Hospital Medical College; Surgeon to Bellevue and Charity Hospitals, etc. etc.

ADOLPH N. ROUSSELL, 810 Sixth Avenue, New York, aged 9½; had hip-disease for many months, the result of a slight injury received while recovering from a severe attack of fever. Suppuration soon set in, and when I saw him, October 20th, 1864, he presented the usual appearances of hip-disease, the thigh and leg being well drawn up and adducted over the other thigh. Several sinuses also existed, through which the probe readily passed to dead bone in the neighborhood of the hip-joint.

A free incision was made over the trochanter major, connecting three or four of the sinuses into one, and giving exit to a large amount of pus. After the escape of the pus, the bones gave a distinct crepitus on being rubbed together, and an opening was found in the capsule on its inner and posterior boundary.

The capsule was laid freely open, and the incision carried down over the trochanter major, *fairly through the periosteum* (which was much thickened), to a point opposite the trochanter minor; the soft parts being held well apart by spatulas in the hands of Dr. James S. Steele, who was my only assistant in the operation, except my son, a lad twelve years of age. I made another incision through the periosteum, at right angles to the first: this division through the periosteum was carried on either side of the first as far around the bone as I could go,—making the periosteal cut in the form of an inverted T (⊥).

Into the angles thus made I pressed my periosteal elevator, which is a large and firm instrument, very much like the ordinary "oyster-knife." With this instrument the periosteum was readily peeled off, necessarily carrying along all of the muscles attached to it, which, in my judgment, is the most important feature of the operation, for on this particular fact depends the future usefulness of the joint.

The *cutting* edge of the knife was only required to separate the attachment of the rotator muscles in the digital fossæ, behind the great trochanter. All of the rest was peeled off with great facility on the external portion, and the thigh being then firmly adducted across the other, the bone was easily luxated from the acetabulum, and peeled itself from the internal layer of periosteum,—which was left *in situ*,—and thus made a continuous wall or layer of dense fibrous tissue, which prevented the burrowing of pus on the inner portion of the thigh.

The femur was then sawed off just above the trochanter minor, but the bone being diseased was readily pushed up through the periosteum, and again sawed off one inch and a quarter below this point; the limb then being reduced to its proper position, this cuff of periosteum was incised, so as to prevent any pocketing of matter. Several pieces of bone were easily removed from the acetabulum with forceps, and the whole of the denuded surface thoroughly scraped.

After injecting with warm water, to wash away all débris, the patient was placed in the "Wire Breeches," the wound filled with Peruvian balsam and stuffed with oakum, and the limb extended to its normal length.

No vessels were tied in the operation. A few strips of adhesive plaster at the top and bottom of the incision, with a firm roller around the limb and pelvis, constituted the dressing.

From the day of the operation he began to improve in his general health. A very generous and nutritious diet, with a full allowance of ale, together with daily washing the wound, filling it with Peruvian balsam and oakum, and always keeping the parts sustained by a well-adjusted roller to prevent the burrowing of pus, was the treatment.

After a few days he was able to be carried out to ride, wearing the wire breeches. At the end of six months I applied my

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PLATE X.

PHOSPHATIC CALCULI.

hip-splint in the daytime, when he could exercise freely with his crutches, and at night I kept up the extension by a weight and pulley at the foot of the bed.

The sinuses all healed in about eight months, and at the end of a year he walked quite well with crutches, and with only a half-inch shortening by the most careful measurement.

He used his crutches for about eighteen months, and afterwards a cane for eight weeks, but for the last four years has used nothing,—walking without any limp. He can run and dance as well as any boy of his age,—in fact, won a pair of skates, in a skating-match on the Central Park Pond, in December, 1869.

The most remarkable feature of the case is, that the limb continues to grow in length as fast as the other, and there is now scarcely a half-inch difference in the length of the two by the most accurate measurement.

The photographs—showing the result of the operation—represent the length very accurately, as well as the ability to flex the limb, and also to bear the entire weight of the body upon it. I think it can very fairly be called the most successful case of reproduction of the hip-joint that has as yet been recorded.

Case of Impacted Phosphatic Calculi in the Urethra, with numerous Vesical Calculi.

BY THOMAS G. MORTON, M.D.,

Surgeon to the Pennsylvania Hospital.

IN the month of August, 1869, Mr. E. H. Wright, of Vincent-town, New Jersey, called upon me, requesting an examination of his urethra, in the hope of some relief for a stricture, which had given him intense suffering for a number of years; stating that no amelioration of his trouble was experienced, although he had had long-continued medical treatment prior to his coming to the city. The patient was pale, haggard, and emaciated, and although but fifty years of age, looked much older.

He informed me that his earliest symptom of urinary difficulty occurred when he was about nineteen years of age, and that when crossing a field, on attempting to urinate while walking, he experienced a sudden pain far back in the urethra and an immediate stoppage in the flow; retention during the succeeding thirty-six hours resulted, and after the use of warm fomentations, the urine was again voided; at this time, as well as since, he has been aware of some urethral impediment.

This did not, however, interfere with his marriage in early life, and several children resulted from the union.

The urethral difficulty gradually increased, and pain became a constant and prominent symptom. A second marriage, some years later, yielded no issue,—the patient found that the semen was retained either in the bladder or urethra, and some time afterwards would dribble away with the urine.

The pain during the past ten years had been intolerable, and has been increasingly so during the last year, which he described as worse than death. A constant desire to empty the bladder, with incontinence of urine, has existed for several years, and for more than a twelvemonth the flow of urine has been accompanied by blood, mucus, and pus in considerable quantity.

During the past few years, in order to get relief from pain, he had contracted the habit of opium-eating, and took a very large amount, never measuring his dose.

On inquiry, I learned that an attempt had been made some five months ago to give relief by a dilatation of the urethra, and a catheter had been inserted every other day, which not only produced terrible agony, but yielded no abatement of his malady. From his long-continued suffering excessive emaciation resulted, and, as might well be supposed, his digestive organs and nervous system were in wretched condition.

On passing a steel bougie, I found that after its introduction a short distance the urethra was blocked up by a mass of calculus, and no attempt was made to pass this obstruction.

Examining the perineum, a long, hard tumor, apparently occupying the urethra, was found, and unquestionably was a continuation backwards of the calculus which I had found in the anterior urethra; a little further manipulation confirmed

this, for this apparent long stone was made up of a number of stones, whose facets rubbed smoothly one upon the other, and allowed considerable motion and deviation in the urethra. It may seem strange, but the patient was amazed when the state of the case was explained to him, for he had never known that he was a subject of calculous disease,—his belief was that only an organic stricture existed. An operation was readily agreed to, and on the 27th of August, in the presence of Drs. Wm. Hunt, Brinton, Packard, Longstreth, and Mears, I made an incision through the perineum, about two inches long, upon the stone, in the median line, and removed a large number of stones, all beautifully joined together; continuing the search towards the bladder, I found that it was necessary to slightly increase the original incision, when the urethra, as far back as the bladder, was found impacted with stones; the bladder had also a considerable number of calculi, varying in size from that of a pigeon-egg to that of a small pea. The urethra was so much dilated that no trouble was experienced in readily introducing the finger into the bladder. As dilatation had been so fully performed, little or no injury of the neck of the viscus was sustained in removing the larger stones. There was an attachment between the last urethral and the first bladder stone, or, perhaps more correctly, the bladder stone was impacted, and in removing its urethral continuation a fracture occurred, and a small fragment remained imbedded in the neck; several attempts failing to extract this, it was thought prudent to abandon the effort.

The patient made a rapid recovery, and without a single bad symptom; in two days he voided the urine by the urethra, and on the tenth day he left for his home in New Jersey.

On the 26th of September following he called, and reported himself as quite well in every respect, and that a small fragment of stone had since passed. In the month of July, 1870, I saw Mr. Wright: he was then in vigorous health, and his bladder and urethra were sound.

Seventeen stones were taken from the urethra, weighing four hundred and forty grains, and five from the bladder, in all weighing two ounces and some grains: they were of the phosphatic variety. The most anterior of the urethral stones measured one and a half inches in length and two inches and a

quarter in circumference ; the total length of the joined urethral stones is three and one-fourth inches, and their greatest circumference two and a quarter inches ; when placed in position, as may be seen in the photograph, the stones have the shape of the urethra.

From the patient's history, it would appear that the stoppage of urine, from which he suffered thirty years before, was doubtless due to the lodgment of a calculus, and that this continued to present a barrier to the escape of urine. The calculi, on forming, were driven as far as the original stone, being shapen to the parts, and, as they increased in size, accommodating themselves one upon the other, while the urethra gradually became dilated. The constant movement of the penis and perineum from muscular contraction and otherwise prevented their union, and produced the beautifully smooth and regular facets between the various calculi, so that when joined they appeared like one long stone.

Gunshot Wound of the Brain followed by Fungus Cerebri, and Recovery with Hemiopsia.

BY W. W. KEEN, M.D., AND WM. THOMSON, M.D.

PATRICK HUGHES, late private of Company K, 4th Regiment, New York Volunteers ; born in 1839, in Ireland ; puddler both before and since enlistment ; wounded at Antietam, September 17th, 1862. Wound of entrance in the middle line, one and a quarter inches above external occipital protuberance,—a small, depressed wound ; wound of exit two by two and a half inches, its centre being two inches to the left of middle line and three inches above wound of entrance. He fell, did not lose consciousness, but, blinded by blood, crept towards the enemy till warned by his comrades, when he crawled behind the ranks and was carried, when faint, to an old barn, where he remained nine days. While here, his eyesight, he thinks, was poor. He was then taken to Mount Pleasant Hospital, Washington, D.C., where he lost his consciousness, and was more or less paralyzed in both right arm and right leg,—whether slowly or suddenly, and whether it extended to the face, he does not

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PLATE XI.

GUNSHOT WOUND OF THE BRAIN.

remember. The paralysis and unconsciousness lasted some two or three months. He remembers having had fungus cerebri as large as his fist, which was shaved off some five or six times.* When he tried to think, he often used to become almost "out of his head." His memory was so bad that between calling the doctor and his turning to hear the question he would forget what he desired to say. He had no aphasia. In four and a half months he was able to come to Philadelphia. In walking he was very giddy; noise and laughter used to hurt him badly. His mental and physical power gradually grew better, and in one year his paralysis had almost disappeared.

Present Condition, December 20th, 1870.—His memory is quite good, but by no means so good as before the injury. He is rather easily bothered and confused, and more irritable than formerly. The sight of his right eye he thinks is poor. Whiskey affects him as usual. Sexual power undiminished. He has no paralysis. The wound of entrance (see photograph—the head was shaven in order to have the photograph taken) is marked by a slight depression in the bone, the wound of exit by a hollow two and a half by two inches, and one inch deep. No bone has closed this opening, but the scalp and hair dip down into the hollow. The arterial pulsations are barely perceptible. When recumbent, the hollow is gradually obliterated and replaced in about one minute by a rounded protuberance. To prevent pain during this change, he supports the parts with his hand. When he coughs, even with moderate force, the depressed scalp instantly bulges up in a cone, which nearly reaches the general level of the skull and obliterates the depression, and then as suddenly subsides.

The eyes, upon examination, present the following conditions: There is no ptosis on either side; entire mobility of the eyes under direction of the will; both pupils normal in size, and responsive to light. Upon the left cornea is to be seen a slight leucoma, the result of a burn from a piece of metal, received two years since. In all other respects both eyes are, in appearance, perfectly normal. Refraction of each eye is found to be emmetropic. The acuteness of vision is for the

* Confirmed by Dr. C. A. McCall, U. S. A., who had him in charge at the time

right $\frac{1}{4}$, and for the left $\frac{1}{1.5}$; the slight impairment of vision being due to the result of the burn, which caused not only slight opacity of the cornea, but also irregular astigmatism. The power of accommodation is for each eye $\frac{1}{4.5}$. There is no diplopia, and no insufficiency of either internus.

Upon testing the field of vision, it is found to be divided for each eye by a line passing through its centre, in the vertical direction,—total blindness existing to the right, and perfect vision to the left, of this line. When, for example, the right eye is fixed upon a point of light eight feet distant, a second point of light is lost to view when it is moved one inch towards the right; and precisely the same condition exists for the left eye,—*i.e.* the light is lost one inch to the right of the median line. With the *right* eye it is not possible to determine the spot of Marriotte,—that is, the blind spot in the field corresponding to the entrance of the optic nerve (see the diagram, p. 29),—since the insensitiveness of the retina in that eye commences at the inner margin of the macula lutea, and extends to the entire inner half of the retina. With the *left* eye, that portion of the retina between the optic nerve entrance and the macula is found normal in sensitiveness; since, when at four feet the left eye is fixed upon a point of light, a second light is clearly perceived as it is moved towards the left until it has reached a point about nine inches to the left, where it is lost, to reappear at a point about thirteen inches from the first light. Beyond this point the field has its normal extent.

By ophthalmoscopic examination no pathological appearances whatever could be observed, either in the retina or at either optic papilla, beyond the distortion caused in the left eye by the astigmatism probably of traumatic origin, as mentioned above.

REMARKS.

I. This case is briefly referred to in Circular No. 6, S. G. O., 1865, at the bottom of page 15; and Dr. Otis writes us that it will be fully related in the first volume of the Surgical History of the War, with the chromo-lithograph of the fungus cerebri. As it must first be presented to Congress and published by the Department, no opportunity was presented us of correcting the

history by these notes. The history here presented, therefore, as derived from the patient, must be taken with some caution, since the wound has so severely injured his cerebrum. On all points, however, he gave very clear statements.

II. The complete recovery from paralysis (as evinced by his subsequent severe labor), and the almost entire restoration of his mental faculties, are remarkable, especially in view of the probable deep lesion of the brain, both by the primary injury and the subsequent fungus cerebri.

III. The astonishing and rapid changes in the state of the cranial contents, due to any change in position, to coughing, etc., as evinced by the effacement of the depression at the wound of exit, are worthy of note. Whether due to a flow of cerebro-spinal fluid (which would be the principal agent in a change of posture) or to venous congestion (as in coughing), the case shows that our attention has been far too slightly fixed on the medical bearings of such facts in all cases of severe cough, and on their surgical bearings in operations for cataract, etc., during the existence of bronchitis.

IV. The light thrown on the probable anatomy of the optic commissure is also worth our notice.

Wollaston (Phil. Trans., 1824, p. 222), reasoning from two attacks of transient hemiopia, occurring in himself, and other cases in friends, appears to have been the first to point out the semi-decussation of the optic nerves at the chiasm. Longet (Traité de Phys., 2d ed. ii. 476) seems to assent to the explanation, though he refers to cases of perfect sight in which, it is asserted, no chiasm existed; and in his Traité d'Anat. et de Phys. du Syst. Nerv., p. 666, he gives cases of perfect sight in both eyes, in spite of unilateral cerebral atrophy or traumatic lesion. Von Graefe (Archiv, ii. 286) assents cordially to Wollaston's view, admitting that he proposes nothing new, but that it is far too little known.

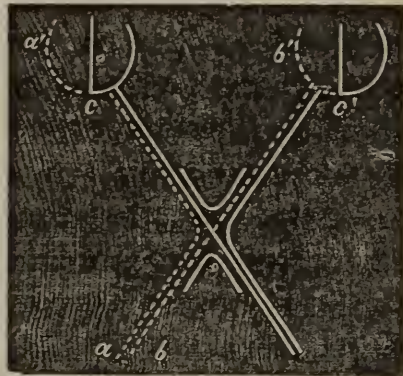


Diagram of the optic commissure and the two retinae. *a, b*, the fibres of the left optic tract supplying, respectively, the left halves of the two retinae *a' b'*; *c, c'*, the maculae luteae.

The inter-retinal and inter-cerebral fibres are merely indicated.

Hubert Airy (On a Distinct Form of Transient Hemiopsia, Proc. Roy. Soc., Feb. 17, 1870, in "Nature," i. 444), after a careful examination of preceding writers, also supports it; and the experiments of Laborde and Leven (Med. Gaz., Nov. 5, 1870; from Gaz. Méd. de Paris), who found atrophy of the right optic nerve following the removal of the superficial right cerebral convolutions, and without any apparent irritative processes, would also point in the same direction.

In our own case the point to which we desire to call special attention is the rigid optical examination of the region between the porus opticus and the macula lutea. The semi-decussation of the nerves at the chiasm being admitted, it would naturally be supposed that the fibres *a* from the left tract would supply the left retina from the porus opticus towards *a'*; but our examination shows that it supplies *less* than this, viz., only that part of the retina from *c* to *a'*; while in the right eye the fibres *b*, instead of supplying the retina from the porus opticus to *b'*, supply *more* than this, viz., that part of the retina from *c'* to *b'*. In other words, the fibres *a* and *b* of the left optic tract supply mathematically the left halves of the two retinae from *c* to *a'* and *c'* to *b'*, and the right tract the right halves.

V. As to the cerebral seat of the sense of vision, the amount and depth of the injury to the brain are too uncertain, perhaps, to warrant us in venturing on any speculations as to its locality.

A Case of Inherited Syphilis.

BY JOHN S. PARRY, M.D.,

Attending Accoucheur to the Philadelphia Hospital, etc.

MARY JANE G——, æt. 10 years. Born in Philadelphia.

Family History.—Her parents have been married twelve years, and have had three children, of whom Mary is the eldest. The second child died when seven weeks old, the mother states, of "water on the brain." The third is moderately healthy, is now three years old, and, though of good facial appearance, is disposed to cutaneous disorders; has soft, flabby muscles, and a tumid abdomen. It presents no positive evidence of syphilis.

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PLATE XII.

INHERITED SYPHILIS.

The mother is perfectly healthy; has never had any disease of the skin, sore-throat, or alopecia. She positively asserts that she has never had primary syphilis or gonorrhœa. Her husband is very dissipated, and they are not now living together. It cannot be positively asserted that he had primary syphilis; but his wife believes that he was so affected about one year after their marriage, and one before the patient's birth. The subject was at that time discussed between them, and was the cause of domestic difficulty. She never saw any evidences of secondary syphilis about him. From 1860 to 1865 he was in the army; and after his return home, and until the time of their separation, he complained of having "rheumatism." This was not attended by any acute symptoms, and did not prevent his working, as the pain occurred only at night, though it was quite severe. Both parents have several brothers and sisters living, with large families, all of whom are very healthy.

Previous History.—When born, our patient was a large, healthy child, and, except having the ordinary diseases of children, she continued well until early in 1863. In infancy she was not subject to colds in the head, never had any disease of the skin, or other symptom of her present affection, so far as the mother is informed. The existing disease began in February, 1863, when she was two years and nine months old. She first complained of pain in the right leg, and, upon examination, a round, hard, tender swelling was discovered near the middle and upon the anterior surface of the right tibia. This was rapidly followed by similar swellings upon the same and the opposite bone. About two months later, nodes also occurred upon the bones of the forearms, where the cicatrices are shown in the photograph. She then suffered severely from nocturnal pains, her appetite was poor, and she grew rapidly weak. The nodes passed on to suppuration, leaving portions of the affected bones bare, parts of which exfoliated and were thrown off spontaneously, or were removed by the attending physician.

During the next year she had nodes on the forehead, and there was destruction of the bones of the nose. In 1863 the soft palate became ulcerated, and in 1864 the disease involved the hard palate, producing the appearances to be presently described. In 1865 her hearing was destroyed. This was pre-

ceded by some, but not severe, otorrhœa. She has never had any affection of the eyes.

She was admitted to the Philadelphia Hospital in April, 1868. At that time the cicatrized surfaces were the seat of active disease; dead bone projected at various points, and she was profoundly prostrated. She shortly afterward had nodes on the clavicles, and painful ulcerations upon various parts of the body, especially on the shoulders. In the latter part of April, 1870, she had a very severe attack of double pleuro-pneumonia.

Present Condition, Nov. 1870.—Hair is thin, fine, and dry. Forehead prominent, arched, and tender on pressure. There is a tender cicatrix over left frontal prominence. The bridge of nose is depressed, and on its surface is a white excavated cicatrix. The central incisors of the upper jaw have been destroyed. The remaining teeth are well developed, but irregular in position. In the roof of the mouth is an oval orifice an inch long and half as wide, extending backward nearly to the soft palate. The latter is perforated just anterior to the uvula. There are evidences of previous ulceration of the half arches and tonsils; but there is at present no active disease of any of these parts. The eyes are natural, except that there is a little opacity at the superior margin of each cornea.

Skin is everywhere dry, harsh, and dingy. Upon the thorax the superficial veins are considerably enlarged. At the left sterno-clavicular articulation is a cicatrix. Upon each shoulder others are found, irregular in outline and about two inches in diameter. Both clavicles and the upper part of the sternum are very tender. The whole under surface of the right forearm presents a continuous scar, involving about one-third of the circumference of the limb. Portions of the muscles have been destroyed, and the skin is tightly adherent to the bone. The wrist is ankylosed with the arm,—semi-pronated. Her left forearm is almost precisely like the right, but the wrist is not ankylosed. The skin is tightly adherent to the ulna.

Upon the anterior surface of the right leg is a series of scars, and the tibia is enlarged and irregular in its outline. Upon this side are two open ulcers,—one over the external malleolus, and the other two inches above. From both there is a thin, unhealthy, very offensive discharge, and both communicate with

dead bone. Upon the left leg are two irregular and large cicatrices,—one on the upper anterior portion, and the other two inches above the inner malleolus.

The liver and spleen are both slightly enlarged. Excepting on the right leg, the disease is nowhere in active progress. Her intelligence is good.

TREATMENT.

After her admission she took iodide of potassium and bichloride of mercury, and later, the iodide with tonics, cod-liver oil, and a generous diet.

REMARKS.

This case is interesting, not only on account of the severity of the lesions and the return to comparatively good health, but because the onset of the disease was delayed until she was nearly three years old, and made its appearance in the form of tertiary syphilis. I have repeatedly and carefully sifted the history, and always with the same result. Her mother, an intelligent woman, denies that the child ever had a skin disease in her life. I cannot learn either that she ever had any opportunity to acquire the affection after birth. The point to which I wish to direct particular attention is the fact that our patient probably derived the infection from her father. Prof. Boeck, of Christiania, in a paper published in *The American Journal of Syphilography and Dermatology* for Jan. 1870, page 16, says: "If the father has had constitutional syphilis, the child may inherit the disease; but this is rather the exception than the rule." My attention had never been directed to this point before reading Prof. Boeck's article, but since that time I have had several opportunities to verify his experience, and in every instance it has been confirmed. The cases, however, are not sufficiently numerous to warrant a positive opinion.

In the history of this patient there is no evidence whatever that the mother has ever had primary syphilis, and she has certainly never suffered from secondary or tertiary symptoms. On the other hand, it is almost certain that the father had chancres about one year before Mary's birth, and it is highly probable that he had osteocopic pains when he complained of rheumatism, after his return from the army.



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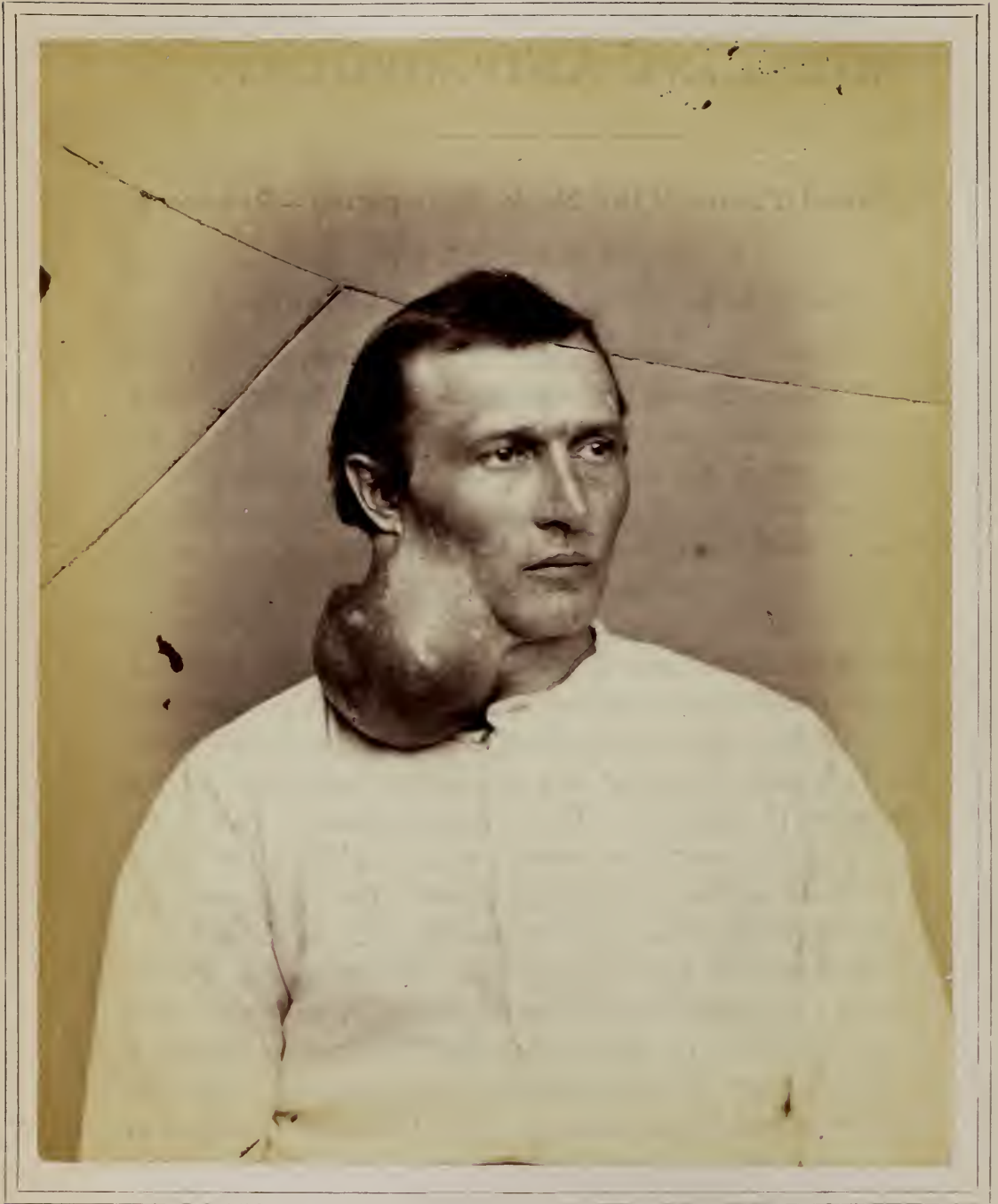


PLATE XIII.

ENCEPHALOID TUMOR.

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Encephaloid Tumor of the Neck. Extirpation—Recovery.

BY JOSEPH PANCOAST, M.D.,

Professor of Anatomy in the Jefferson Medical College, Philadelphia.

JOSHUA SHAW, the patient under consideration, æt. 37, is a native of Luzerne County, Pa., and a blacksmith by occupation. He is married, and has two healthy children. Neither of his parents, nor any of his relatives, so far as he knows, have ever been affected with any similar disease. He has always enjoyed good health until about four and a half years ago, when a small tumor made its appearance in the submaxillary region, the consequence, he thinks, of an old sore throat. Doubtless, from his description, he suffered from an enlarged lymphatic gland, situated above the submaxillary salivary gland. At first this grew slowly, but later increased rapidly in size, especially during the last year, assuming the appearance presented in the accompanying photograph. The tumor produced no pain, however, nor any inconvenience, except what might be accounted for by pressure on the surrounding parts. The measurements of the tumor, taken prior to the operation, were as follows:

Circumference of base, 14 inches; circumference antero-posteriorly, 11 inches; circumference vertically, 9 inches. The tumor was irregular in shape, nodulated, and presented many points of softening; it had moreover a purplish hue, especially upon the back and lower portion. The tumor was covered in every direction with enlarged veins, some of which had opened spontaneously at different times, giving rise to a free discharge of black and grumous blood. The temperature of the tumor was high. It was slightly movable, but with apparently very

deep attachments to the sterno-cleido-mastoid muscle, and to the parts beneath it.

OPERATION.

The patient was put fully under the influence of ether. The integuments were then opened with an irregular circular incision—including a portion of healthy skin—down to the base of the tumor, the division being carefully made on a grooved director. The bands of connective tissue which held the tumor down, were in like manner divided. The mass was loosened above, where it covered in part the parotid and mastoid regions. The ascending branches of the cervical plexus of nerves, as well as two-thirds of the sterno-cleido-mastoid muscle, were completely involved in the morbid growth, and had to be divided and removed with it. The attachment to the sheaths of the great vessels was quite firm, but separable with the finger. The posterior belly of the digastric and the stylo-hyoid muscles lay fully exposed in the upper part of the wound. But little blood was lost in the operation, it being necessary to apply but six ligatures, while the capillary oozing was arrested by the soap and potassa styptic. There was a free discharge of bloody fluid from the tumor itself.

The after-treatment was simple,—the parts being brought together with the ordinary interrupted suture, supported by adhesive strips, a piece of lint spread with carbolated oxide of zinc ointment, being laid on the wound. The patient's recovery was rapid, being able to sit up on the third day, and walking out-of-doors on the sixth day, while at the time of writing (Jan. 18th, 1871, fifteen days after the operation) the wound has almost entirely healed. To the naked eye the tumor appeared to contain here and there numerous cysts, the great mass seeming to be composed of a gelatiniform-looking substance, containing large patches of tubercular and fatty matter.

The microscopical examination was kindly made by Drs. Jenks and Markoe, and revealed the tumor to consist of trabeculæ of connective tissue, containing blood-vessels, and inclosing alveoli filled with closely-packed epithelial cells. The youngest portions of the tumor were soft, grayish, semi-transparent, and vascular, resembling the cerebrum in appearance;

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PLATE XIV.
ENCHONDROMA.

other portions, evidently older, had undergone fatty degeneration; while the centre of the mass consisted of white, friable, cheesy—so-called tubercular—matter. Hemorrhagic foci were found, containing blood crystals. The capsule was thick, and consisted of layers of organized lymph, being in places white, hard, shining, and elastic, and corresponded in structure, microscopically, with reticular cartilage. The lymphatic glands in the neighborhood were large, and filled with proliferating cells, though their histological character was preserved.

In conclusion, I would express my obligations to Dr. T. H. Andrews, chief of clinic, for the able manner in which he has drawn up the history and notes of the case.

Enchondroma—the Disease in a State of Ulceration.

BY JOHN E. PENDLETON, M.D., of Hartford, Kentucky.

THE accompanying photographic representation conveys a very correct idea of the present appearance of Daniel McDowell, æt. 22, an inmate of the Ohio County (Kentucky) Almshouse, colored, and born free in Jackson County, Tenn. The left hand is congenitally atrophied, attributed, by his mother, to an impression upon her, by the sight of a hand mutilated in a fight, while pregnant.

At the age of five years, the second and third metacarpal bones began and continued to enlarge on their dorsal aspect, until they united and formed a double tumor, of the size of two small oranges, and thus remained for nearly eleven years, without tenderness or pain.

In the latter part of his sixteenth year, all the metacarpal bones and phalanges of the hand, except those of the thumb, became involved, and in a few months the member was converted into an irregularly rounded mass, of probably six or seven pounds' weight, from which the fingers projected—as John Bell not inaptly remarked—"like the toes of the sculptured griffin."

In the mean time, a new tumor, of apparently the same

nature, formed in the axilla, attaining the size of a large foetal head, and in this condition he first presented himself to me, now more than three years ago.

Both masses were firm and inelastic over nearly their whole extent. That of the hand, at two points, of nearly an inch in diameter, fluctuated under pressure,—evidently cysts containing a liquid,—around which was a considerable degree of tenderness. The skin was sound and natural over the whole surface. Pressure at any other point did not produce the slightest uneasiness. That of the axilla was much more sensitive to the touch, and frequently the seat of sharp or keen and darting pains; but the sensitiveness did not seem to be so much in the morbid mass as in the structures upon which it grew and encroached beneath.

Over a third or more of its surface existed an open ulcer, profusely discharging a greenish, offensive pus. His constitution had as yet suffered comparatively little. The appetite, digestion, and secretions were almost perfect. I proposed to amputate the arm and extirpate the axillary growth. He then requested time to consider and prepare for the operation; when, in the mean time, he fell into the hands of a “cancer doctor,” who, by means of powerful escharotics, destroyed more than half of both tumors. Shortly after this he returned to me, the humerus and scapula having become involved, and the superficial veins of the arm so much enlarged—as may be seen in the photograph—that I withdrew the proposition to interfere, sending him to the county almshouse, in charge of my friend Dr. J. T. Miller, where we have frequently seen him together, and where he still remains.

The history and symptoms, I think, clearly demonstrate both tumors to be cartilaginous. In keeping with the remark of Prof. Gross, that this disease most frequently attacks the weak and rickety, the present victim, by his “bow-legs” and ungainly appearance, plainly testifies to an early want of proper nutrition; and still more, that it began in his hand, congenitally atrophied.

The slow and painless progress of the first metacarpal tumors; then their long period of arrested growth; the new impetus, rapid development, and tendency to multiplicity and

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PLATE XV.
ELEPHANTIASIS ARABUM.

ulceration, are all signs allowed by Mr. Paget to this species of homologous formations.

Their cause is not well made out, but is probably the same in many instances, more remotely however, as those inducing rachitis; but in the one there seem to be present the identical materials—chondrin and gelatine—that are wanting in the osseous structure of the other.

It is generally conceded, I believe, that rickets comes from want of pure air and healthy food in early life, and may in after-years result in the heteroplasm, or misapplication of material, to be seen in enchondroma.

The degree of firmness often varies in cartilaginous tumors, and even in different parts of the same growth, as was observed in this instance; and still more diverse is their appearance under the microscope.

Although cartilage in position is rarely, if ever, the seat of cancer, and resists to the last its action when thus abnormally situated, it not unfrequently assumes a malignity of action not less ferocious than the most frightful forms of carcinoma. Whether this is inherent, is acquired by local irritation, or is merely coincidence in choice of victims, remains to be investigated.

The treatment consists in extirpation, entire, of the erratic product, even to the sacrifice of a limb, if necessary to accomplish this end.

Possibly in the incipency, alteratives, tonics, fresh air, wholesome food, and healthful exercise, with attention to the secretory and digestive powers, might accomplish something towards impeding the rapidity of growth, or the prevention of starting again after excision; but as to this I cannot speak advisedly of my own knowledge.

Elephantiasis Arabum.

BY H. D. INGRAHAM, M.D., of Kennedy, New York.

THE accompanying photographs are those of Allen Stockwell, a resident of Poland, Chautauqua County, N.Y. He was born, where he now resides, April 22, 1838. His ancestors, both

paternal and maternal, were hardy, rugged people, and his brothers and sisters—he being the eldest of seven children—have a like firm and healthy constitution. His own health has always been good. After he became old enough to labor, he worked in the lumber woods most of his time, making several trips down the Alleghany and Ohio Rivers each year. Like all other lumbermen, he worked hard, was much in the water, and drank a fair allowance of whisky; yet his health was good all this time, and he had no febrile symptoms. His leg commenced to enlarge in the spring of 1858, he being then twenty years of age. At that time he was on a raft lying in the Ohio River, at Cincinnati. The weather was warm, and he was in the water a good deal, removing lumber to the shore, yet he experienced no unusual symptoms, except the slow but gradual enlargement of his leg.

All the text-books that I have consulted upon this subject, claim that there is more or less fever connected with the commencement of this disease; but the patient denies ever having had any fever whatever in connection with the enlargement. He claims that his appetite was good, and that he always felt perfectly well. In the fall of 1859 he was for three or four weeks under the care of Prof. Frank H. Hamilton, then of Buffalo, who succeeded in the reduction of the enlarged limb to about its normal size. Being uneasy, and tiring of hospital discipline, the patient went away, discontinuing treatment.

Since that time his leg has gradually and constantly enlarged, except for a period of four or five weeks, which occurred about six years ago, when he had typhoid fever. During the period of this illness his leg nearly recovered its natural size; but, upon convalescing, it again commenced enlarging, and soon the under and back side of the enlargement above the knee began to discharge an offensive fluid. This discharge has been constant since, though of a variable amount. The skin of the upper part of the thigh is thickened, but is not scaly or of darker color than natural, but from above downwards the skin grows harder, scaly, and of a darker color, so that the integument of the foot very closely resembles that of the elephant. The limb now measures—Dec. 1, 1870—around the greatest enlargement, fifty-seven inches; in the fissure just below it,

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PLATE XVI.

MALFORMATION OF FINGERS AND TOES.

twenty-nine inches; just below the fissure, thirty-six inches; and midway between the knee and ankle, thirty inches. Measurements around the same points, twenty-two months before, gave, respectively, fifty-one, twenty-eight, thirty-three, and twenty-eight inches. The measurement around the instep is twenty-two inches, around the foot, sixteen. The nates are of natural size, so also the right testicle, but the scrotum is fourteen inches in circumference, the enlargement being mostly confined to the left testicle. His weight was formerly from one hundred and thirty-five to one hundred and forty pounds, but he now weighs three hundred pounds. Although his limb is a great burden to him, his health and strength are good, and he makes his usual trips on the rafts, being still considered a good raftsmen. During the remainder of the year he works but little, owing to the difficulty he experiences in walking.

I have been acquainted with him for the past four years, but I have never treated him with a view to produce a reduction of the enlargement, not considering it possible.

Doubtless no more perfect specimen of this disease is to be found anywhere, the case under consideration being one of unusual development.

Malformation of Fingers and Toes.

BY OSCAR H. ALLIS, M.D.

THE following history was taken while I was one of the resident physicians of the Philadelphia Hospital, at the request of Dr. Maury, to whom this journal is chiefly indebted both for this account and for the accompanying photograph.

The case, so far as I can find, is unique.

Josiah F., æt. 25, colored, and a native of Philadelphia. Is married, and had one child, which was well formed. His parents are both perfectly formed.

The photograph represents him as having but two fingers and two toes—the little and ring fingers on each hand, and the great and little toes on each foot; but a more careful description may prove of interest to some.

The thumb, with its corresponding metacarpal bone, is absent on both hands, nor is the index finger present on either hand. The middle finger is apparently absent, but on careful examination the first phalanx may be felt (covered by the integument), turned from its course, and joined to the base of the first phalanx of the ring finger. This description holds good of both hands. The metacarpal bones of the index and middle fingers are small, while those of the ring and little fingers are well developed.

The feet appear to have but two toes, distinct and separate from each other, even to the tarsal articulation. The metatarsal bones of these respective toes are very large. The great toe of the left foot consists of but a single phalanx, without the nail, while the great toe of the right foot consists of two phalanges, with the ungual development. The little toes are perfect.

Though he has but two fingers, and these the two one would suppose to be least serviceable, yet with their use he can dress himself and button his clothes with as much ease as if he had a fully-developed hand. He says that his trade is that of a shoemaker, and that he can do a good day's work at pegging. He can write tolerably well.

The remainder of this history I cannot vouch for.

He stated that he was the eldest of eleven children, and that three out of the number had imperfectly-developed hands and feet. That his brother had no index finger on either hand, and that on the left hand the middle and ring fingers were joined in their entire length.

He moreover stated that his sister had but the thumb, and ring and little fingers on the right hand, but that the left hand was perfect, save the distal phalanges of the index and middle fingers. He also said that both his sister and brother had feet very similar to his own.

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Gordon & Thompson
Philad.^a

Double headed Girl.

*Entered according to act of Congress, in the year 1871, by Mistress Joseph
P. Smith, in the office of the Librarian of Congress at Washington.*

PLATE XVII.

THE CAROLINA TWINS.

PHOTOGRAPHIC REVIEW

OF

MEDICINE AND SURGERY.

The Carolina Twins.

BY WM. H. PANCOAST, M.D.,

Demonstrator of Anatomy in the Jefferson Medical College, Surgeon to the Philadelphia Hospital, and Surgeon to Charity Hospital.

Species 1st.—Pygopagus symmetros.

Derivation.—πυγη, the nates, παγω, I fasten. συυ, with, μετρησιν, to measure.

Definition.—Two individuals more or less complete, separated as low as the pelvis, by the lateral or posterior portions of which they are united; genitals double. In the higher degrees there are two umbilical cords, which are normally attached respectively to each abdomen. Vital organs independent in the type.

Genus 1st.—Pygopagus.

Order 1st.—Terata catadidyma.

Derivation.—τερας, τερατος, a monster; κατα, down, διδυμος, a twin.

Definition.—Duplicity, with more or less separation of the cerebro-spinal axis, from above downwards, under the general head of diploteratology or diploterography, the description and diagnosis of special forms of double monsters.

Under this heading, as the proper place in the classification of a compound monster of duplex development, as so admirably set forth in the excellent article by Dr. G. I. Fisher, of Sing Sing, New York, in the Transactions of the State Medical Society of New York, I would report my observations upon the "Carolina twins," or the "double-headed girl," as they have been called.

This case of pygopagus symmetros came under my professional care, January 18, 1871, while it was on exhibition in this city, in consequence of an abscess forming near the genitals, as stated by Mrs. Smith, who is the guardian of the twins. In the course of their treatment, I was enabled to make the follow-

ing observations and to have them confirmed by my medical friends whom I had the opportunity of inviting to be present. After great persuasion and with the kind assistance of my friend Dr. F. F. Maury (owing to the modesty of the twins and the natural reluctance of Mrs. Smith), the accompanying photograph of them was taken. They clung to their raiment closely, as may be seen, and it was only by earnest entreaty that they were willing to compromise by retaining the drapery as photographed. The expression of their countenances shows their displeasure, as their features ordinarily express great amiability of character. This living example of *pygopagus symmetros* is named Millie and Chrissie Smith. They are negresses, twenty years of age, born of slave parents in Columbus County, North Carolina, July 11, 1851. The parents are still living. The mother is now forty-nine years old and the father fifty-five years. They have had fourteen children, the twins being the ninth birth. The mother can assign no cause for the monstrosity, nor did she ever see the Siamese twins. Dr. P. C. Gooch, in *The Stethoscope* of July, 1852, describes the mother as a very stout negress of thirty-two years of age, very fat and of a large frame and pelvis. Her labor in this case, he says, "was brief and easy. The larger twin was born first by a stomach presentation, and the second came by the breech. The children were noted as being remarkably healthy and sprightly, perfectly formed, and united at the sacra. The band of union seems to be chiefly cartilaginous, but the sacra are so closely approximated that some suppose there is osseous union of them." Dr. Gooch further says that when he first saw them "the elder one was in a tranquil sleep, but it was awakened by the action of the bowels, of the younger and smaller sister, who was then suffering from diarrhœa. When one has an evacuation of the bowels, they both strain." When I was called to see the twins, I found them very intelligent and agreeable, standing about four feet six inches in height, and so closely united that they were clothed in one dress large enough for them both, with sleeves for the four arms and a silken sash tied around their common waist. The frontal development of each was remarkably good, and though their complexion was of the dusky brown of the American negro, and their noses and lips possessed the characteristics

of their race, yet the expression of their faces was so amiable and intelligent, and their manners so well bred, that they produced a most pleasing impression upon me. They sing duets and play upon the guitar very pleasantly, their voices being quite melodious. Though joined at the inferior posterior parts of their bodies by the contiguous sacra, and originally formed so as to be placed back to back, yet they have from their birth instinctively twisted themselves, as if the bond of union had yielded, and their spines have assumed a gibbous form under the exertion, permitting them to assume almost a lateral position, like an expanded V, thus facilitating their movements. They walk each partly sideways, the apex of the V advancing, their main support being from the outer limbs, steadied and guided by the weaker inside legs. Their movements are very graceful, and all the curves of their bodies yield harmoniously to their gliding step, as they walk to and fro, run with swiftness, or dance the schottische, polka, or waltz.

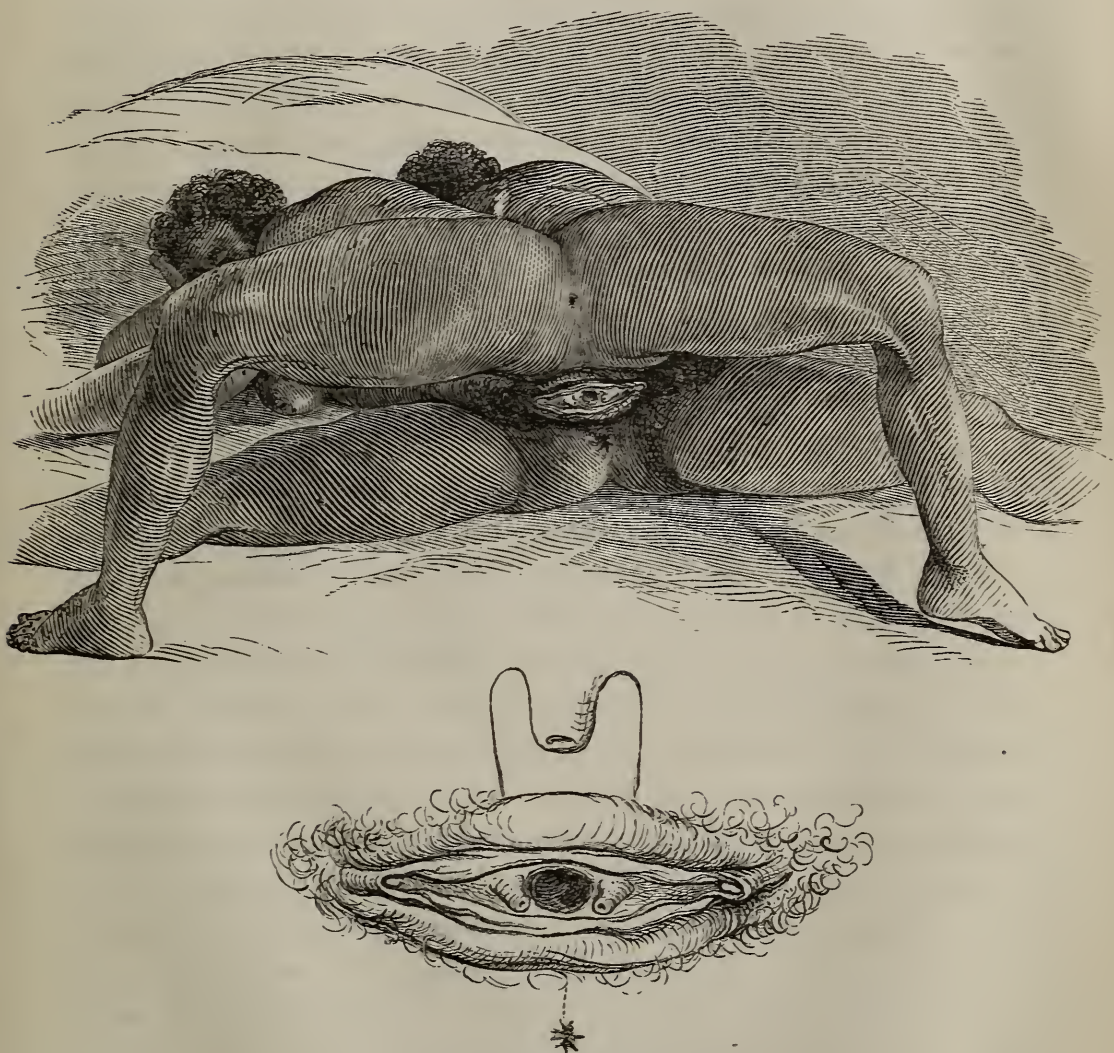
They can either walk easily or stand upon the outer limbs, holding up the inside ones, using the outer limbs as in the case of a single individual. In walking and running they rest upon the outer limbs as they simultaneously swing forward the inner ones, and then, standing on the inner ones, swing forward the outer ones. Owing to the obliquity of the junction, the inner limbs are somewhat shorter than the outer ones, and as they move, they step upon the ball and toes of the inner limbs, which adds much to the elasticity of their step. As they stand fronting me, Millie is on my left hand, and Chrissie on my right. Chrissie is larger and more developed than Millie, who was quite weakly as a child, but is now strong and hearty, owing to the support she has received from her connection with her more robust sister. Chrissie can now, as she has always been able to do, bend over and lift up Millie by the bond of union. This she was in the habit of doing as a part of the exhibition, but as Millie is now so strong and well developed, I advised them to avoid it as a practice, so as not to injure Chrissie's health. Millie, though the weaker physically, has the stronger will, and is the dominating spirit, usually controlling their joint movements, though from long habit one instinctively yields to the other's movements, thus preserving the necessary harmony.

Mrs. Smith tells me that when they were little it was somewhat difficult for them to understand this, and individual desires sometimes led to little struggles and quarrels for supremacy. I noticed that what required only the exertions of one to perform, one alone did, as shutting the door or taking something from the mantel or table. But when their single plate was placed upon their dinner-table, then each used both hands to carry the viands to their respective mouths for transmission through each œsophagus to their separate stomachs, with evident satisfaction to each individual. Each brain acts separately, there are two intelligences, as shown by their conversing with each other, and they can carry on independent trains of thought, as is obvious from their talking at the same time with different persons upon different subjects. In consequence of habit, their functions generally work simultaneously. They are usually hungry at the same time, and generally desire the same food and drink, both drinking a great deal of water. Their habits are very much alike. They generally sleep and wake at nearly the same moment, though one can sleep independently of the other, and sometimes one turns over the other one in bed without awaking her. They defecate and urinate at the same time, though one may have a diarrhœa without the other suffering any pain, or one may be bilious without the other being so, as I found Millie so suffering on one occasion, while Chrissie was not. I ordered Millie a cathartic pill, thinking that she alone required it, but I was told that each had been given one, with the best effect, and I found Millie relieved of her headache.

I believe Millie could be sick at her stomach without Chrissie being so, and *vice versa*. It is reported that one suffered more in teething than the other, and that Millie had the diphtheria, but not Chrissie, and that they both had fever and ague at the same time. They menstruate regularly and naturally at the same time, and have done so since they were thirteen years old, there being no more blood on the napkin than is natural to a female of their age. Chrissie, on their left, is a little taller, stronger, and more robust than Millie, on their right. As far as can be recognized, there is no transposition of viscera. The hearts are nearly in their respective places, and, allowing for the curvature of their spines, there is but the slightest deviation of

the respective apices to the median line. The heart and lung sounds are normal. The individuality of each twin was again shown on examining the pulse. On several occasions, Millie's pulse was found to be from ten to twelve beats quicker than Chrissie's. At one time Millie's pulse was ninety-six beats and Chrissie's eighty-four; on another occasion, Millie's was eighty while Chrissie's was sixty-eight.

When called to examine the so-called abscess, I caused them



to lie down upon the bed. In lying upon their backs, Chrissie was upon my right and Millie on my left, both limbs on each side drawn up. They lifted up the inside limbs as far as they could, but I was obliged to push them gently up still farther. I found only one vulva, deeply placed between the four limbs.

The above wood-cut, drawn by the artist, Mr. Faber, from my

description, represents the appearance they presented. Each lying upon her side, it shows how each vulva, commencing at the mons and running back between the limbs, meets the opposite vulva, thus making a common vulva joined at the fourchette. There is neither posterior commissure nor fossa navicularis. Hence only one vagina, on each side of which, at the right and left margin, juts out the meatus urinarius proper to each individual, then the vestibule between each meatus and clitoris. There are two urethræ, two^m vestibuli, two clitorides, two nymphæ, and two labiæ majoræ. The labiæ majoræ are continuous with each other. The vulva, as they lie, appears, as it were, crosswise, owing to their position, the limbs being firmly flexed upon each abdomen. About $\frac{1}{2}$ inch below the middle of this common vulva is found the common anus, and in the same median line, and in a depression simulating the appearance of an imperfect anus, about $2\frac{1}{2}$ inches above the vulva, was a fistulous opening which I had been called to see as an abscess. This had been annoying them for some months, occasionally closing up, then inflaming, opening, and discharging matter. Into this I could readily pass a good-sized probe; and I found it to lead upwards and backwards and inwards, as they lay, for some $3\frac{1}{2}$ inches. On withdrawing the probe, which gave but very little pain, I noticed a marked fecal odor in the discharge upon it, although there was no odor perceptible otherwise. This sinus I concluded to be an opening into the common bowel, and judged it to be the result of an abortive effort of nature to make a second anus and rectum. On examining the vagina, which gave them more annoyance than pain, I found no hymen present, but the orifice naturally small and contracted, as that of an ordinary young unmarried woman. I readily passed my index finger up its whole length. I found only one vagina, and no bifurcation of it, only one womb, with an unusually long neck, around which the finger could be readily passed until it pressed against the *cul-de-sac* of the vagina, where I could still feel the body of the womb, but no apparent subdivision, though two distinct wombs might have coalesced above by their respective fundi. Dr. F. H. Ramsbotham, who examined them when five years old, in his report says: "There are two vaginæ, and without doubt two uteri" (Fisher); but there is now only one

vagina; and the gentlemen who examined the twins with myself could clearly recognize only one uterus in the common vagina. The vulva, on each side, begins underneath at some little distance behind the symphysis pubis. Each symphysis is natural, and separated from the other by the width of the two bodies between the thighs. I passed a metallic female catheter into each urethra, and could distinctly recognize a partition between the two bladders. I passed then two metallic catheters, one into each bladder; they did not touch each other, but pressed against the dividing partition.

On passing my finger into the rectum, I could not reach the point of bifurcation, nor feel the probe distinctly that I had passed into the sinus, but I could recognize perfectly the apex of a coccyx, thicker and stronger than natural, as if formed by the junction above of two, and on the lower side of the joined pelvis as they lay. There were four ischial tuberosities, two for each side, and in nearly their proper relations to the respective trochanters, but opposed somewhat obliquely, as can be readily understood from the twisting of the spinal columns above referred to. The band of union, as shown in the photograph, I measured, and found it to be 26 inches in circumference. At five years of age, according to Dr. F. H. Ramsbotham, it was 16 inches in circumference. The distance between the top of the crest of the one ilium to the other, at its greatest breadth on the back, was $14\frac{1}{2}$ inches. There were two umbilici. To establish the accuracy of my examination, I invited upon one occasion Prof. Pancoast, Prof. Gross, Dr. Seavy, of Bangor, Maine, and Dr. T. H. Andrews; and upon another, Dr. R. J. Levis and Dr. S. H. Dickson, Jr. These gentlemen agreed with me that there was but one vagina, but one womb to be recognized, but one perfect anus, and that the parts are as I have described them. We also decided that the fistula communicated with the bowel; that the respective recti united at some point above, out of the reach of digital exploration; that the osseous junction was by the union of the sacra and coccyges; and also that the caudæ equinæ of each spinal cord were more or less united. For on touching the left leg of Millie, the sensation and number of touches are recognized by Chrissie, but not

the spot; and on touching the right leg of Chrissie similar effects are produced.

In company with Dr. J. Murray Barton, I applied an æsthesiometer on the inside of the leg, first of Chrissie, and then of Millie, and found the limit of tactile recognition to be about $2\frac{1}{2}$ inches. On the 8th of March last I invited Dr. Wm. Pepper and Dr. R. M. Townsend to accompany me in my visit. We placed the pole of a Faradaic current in the hand of Millie, another on the outside of the outer limb of Chrissie. They both felt it. On placing one pole in Chrissie's left hand, and the other on the external popliteal nerve of Millie's outer leg, the current produced powerful contractions of the peronei muscles of Millie's limb. Chrissie also felt the current in her left arm. When one pole was placed on the external popliteal nerve of Millie's outside leg, and the other pole applied at the same point on Chrissie's outside leg, powerful contractions were simultaneously made by the peronei muscles of both outer limbs. The sensation was recognized from the points of application down to the ends of each one's toes. When the poles were applied to the middle line of the connecting band and the external popliteal nerve of Millie's outer leg, both felt the current, Chrissie feeling the current in Millie's leg, Millie's muscles contracting powerfully.

One pole being applied on each dorsal region, the current is at once recognized by both. One pole placed over Chrissie's dorsal region, another over the patellar plexus of Millie's outer leg, a current is established that they both feel, and powerful contractions of the muscles of Millie's thigh are produced. We asked, one at a time, to try to lift up the leg or legs of the other, but this neither one could do; each one having complete control, however, over the limbs belonging to her trunk. I applied the point of a lead-pencil to the top of the band of union at the exact middle line, and each recognized the sensation; but removing the point on either side less than an inch, only the one touched recognized the sensation.

It is an interesting feature in this case, that it presents many points of similarity to that of the Hungarian sisters, born October 26, 1701, and that there is no similar case reported reaching adult life for one hundred and seventy years. The Hungarian

sisters were similarly united, a symmetrical pygopagus. A description of them is found in the Philosophical Transactions, vol. 1. page 311 (Torkos). On referring to it, we find that Helen, the stronger twin, was first delivered as far as the navel, Judith following in a reverse order. Dr. P. C. Gooch reports that the larger child of the Carolina twins (Chrissie) was born first by a stomach presentation, and the smaller (Millie) came by the breech. Judith, from an attack of paralysis, in her sixth year was much weaker than Helen. So Millie was much weaker than Chrissie in her childhood, but has increased and grown stronger since.

Menstruation with the Hungarian sisters occurred at the age of sixteen years, was continued regularly, although one was unwell a week sooner than the other. The Carolina twins also menstruate regularly, and at the same time, as I am informed. With the Hungarians one suffered from a slight indisposition independent of the other; it is the same with the Carolina twins. The Hungarians were intelligent; so are the Carolina twins. The Hungarians could not walk side by side; when one went forwards, the other went backwards. When one stopped, she raised her sister off from the ground, which Helen often performed, being the stronger. They had no sensibility in common, except in the immediate vicinity of the line of junction. Millie and Chrissie cannot place themselves accurately side by side; there is a marked obliquity of position, for originally they were placed back to back.

Chrissie, being the stronger, can readily lift up Millie on her back by the band of union. The sensibility is only common at the line of junction, or very near it, and in the two inner lower extremities. The vulva in both these cases is common to each twin, and hidden inferiorly between the four thighs. The urinary organs are separate in each case. The vagina bifurcated in the Hungarians; not so in the Carolina twins,—one womb only can be recognized in the latter. I cannot find mention of this point in the Hungarians, but, as there were two vaginæ, I presume there were two wombs. One rectum in each case. The desire to defecate is simultaneous in both cases. But with the Hungarians it was not so with the inclination to urinate. They would even dispute about it sometimes, though generally

amiable to each other. The Carolina twins micturate simultaneously, it is reported; but I believe that the consentaneous micturition and defecation are the result of habit. For in the case of the Ischiopagus Tripus Asymmetros, Minnie and Mina, now on exhibition here, aged four months, having a common genitalia and anus, each one defecates separately, as can be seen by the reddening of the face and the straining of the abdominal muscles of one while the other is tranquil. In each case the temperaments are decidedly different, and the mental functions and nervous systems seem to be quite independent. In the case of the Hungarian sisters, one often slept while the other was awake; they were affected differently by hunger; one could read and write while the other was asleep. So also is it with the Carolina twins. The osseous union of the Hungarians was from the second vertebral elements of the sacra to the end of the coccyges. The union is similar in the Carolina twins. In the case of the two Hungarians, the aortæ anastomosed inferiorly at the point where the iliacs were given off. The ascending venæ cavæ were connected correspondingly, thus establishing a large and direct communication between the two hearts, producing, of course, a great community of life and functions. So I believe it to be with the Carolina twins, and in each case there are two separate hearts.

Thus we find a great similarity in the organization, both physical and mental, of these two cases of remarkable twins. The Hungarians lived to the age of twenty-one years, and as in their case it was considered impossible to separate them with safety, so I believe it to be with these (Millie and Chrissie); and as the Carolina twins are united in life, so I believe they will be in death, and that the analogy to the Hungarian sisters will be carried out to the last. The union, arterial and nervous, is so intimate, that if either Millie or Chrissie shall die first, the other will succumb almost at the same moment, either from the impression upon the circulation or upon the nervous system. So was it with the Hungarian sisters. Judith died from an affection of the brain and lungs. Helen, who had previously enjoyed good health, was taken ill with a slight fever, soon after her sister's indisposition, and suddenly sank into a state of collapse, yet preserving her mental faculties; after a short struggle she

became the victim of the malady of her sister, both expiring almost at the same moment.

Eccardus (*de Sororibus Gemellis cohærint*, 1709), among other questions in regard to the Hungarian sisters, discusses whether their condition would admit of or justify the solemn rite of matrimony. He answers that physically there are no serious objections, but morally there are insuperable ones, more particularly on account of the extreme liability of propagating monsters. I agree with him, in reference to the Carolina twins, that physically there are no serious objections, but that morally there are insuperable ones; but I do not believe with him that such marital union would necessarily produce monsters.

The most interesting point in the consideration of these cases of duplex formations is, perhaps, in reference to their embryogeny. Where there is simply an outgrowth of some supernumerary part, or even where there is a secondary body more or less complete, but only one intelligence, the development of the monster might very readily be explained by some one of the various theories that have been suggested by different writers upon Teratology. The most plausible theories are, that these duplex existences are due either to the accidental fusion of two embryos at some early period of their development, or to the existence of a double yolk, or to the proximity and relative position of the neural axes of two more or less complete primitive traces, developed in the vitelline membrane of a single ovum, as suggested by Dr. G. J. Fisher, or to a hypertrophic power or process of budding, or to the fissuration of the cerebro-spinal axis at an early period of foetal life, as suggested by Dr. H. R. Storer. We must first, I think, explain the development of these duplex formations before we can again discuss the question whether the quality of monstrosity be original to the ovum or acquired by it. This discussion was carried on from 1724 to 1743, Messrs. Lémery and Winslow being the principal champions, and was only terminated by the death of Lémery.

A double formation, from the head downwards, or from the coccyx upwards, might be well explained by Dr. H. R. Storer's theory of the fissuration of the cerebro-spinal axis, or by a fissuration of the primitive trace or groove, provided the duplex

existence has not two brains or two intelligences. In Freyling's case of the two united females (symmetrical pygopagus) born in Carinola, Italy, A.D. 1700, and who died at the age of four months, after being separated, there were two intelligences. On the other hand, in the case of George Washington —, when the supernumerary body was cut from the cheek with the *écraseur* by Professor Pancoast, no intelligence died out. George Washington — lived, and is living now. Here was one perfect cerebro-spinal system, in one complete body, united to an incomplete cerebro-spinal system in the imperfect body. The connection of the incomplete body with the complete was such that great fears were entertained lest the child, only seven months old, should succumb to the operation. In assisting in giving ether, I was ordered to cease administering it, lest the child should die; for here there was only one intelligence; there was none in the supernumerary body.

The theory of fissuration, or that of the fusion of two primitive traces, might well account for the development of this case (cephalopagus prosopodidymus), as they explain the hypertrophy, or in a case of a single entity; but they do not seem to account for the existence of two entities, which would appear to involve the idea of two original germs. If the two primitive grooves represent two entities, then how are these two grooves developed? For any doctrine to explain satisfactorily these duplex formations ought to account for the highest as well as the lowest grades of union. Neither of these two theories would explain the development of the Carinola twins, the Hungarian sisters, the Siamese twins, the Carolina twins, or the case of Ischiopagus Tripus, Mina and Minnie, or any of the duplex formations possessing two intelligences, unless they can account for the development of the two intelligences. In conversation with the Siamese twins, with the Carolina twins, and in Mina and Minnie, I recognized two distinct intelligences. It is difficult to avoid the conclusion that such cases are due to the development of two entities at the earliest stage of embryogenesis, whether by the ordinary manner of fecundation of the spermatozoa, or by a double-headed spermatozoon, the existence of which Dr. H. R. Storer says was demonstrated to him by Professor Salisbury, of Cleveland,

Ohio. If the bicephalous spermatozoon be proved to exist ordinarily, it would be yet difficult to understand how it could impress the germinal vesicle in a manner to produce these duplex formations, although we know that the sperm cell makes a great impression upon the germinal vesicle. It might, possibly, have as much power in determining the sex and peculiarities of the embryo as the ovum itself, for we know that characteristics of the father are transmitted. But to effect the doubling of the embryo, and the formation of two primitive grooves, it would seem as if it should have the power of splitting the germinal cell in two, or that the germinal cell must possess the power of doubling itself, or that there should be two germinal cells or vesicles to be fecundated.

With the existence of two intelligences there exist, also, two entities, each one, it would seem probable, due to the development of a corresponding germinal vesicle, fecundated at the same time, or one soon after the other. That two or more ova can be impregnated about the same time in the human female we know, as in the case of twins or triplets. In the inferior animals—those that produce litters—we have several ova fecundated at the same connection, and each is produced perfect, as each ovum is kept separate from the other; but let any two fuse during any stage of their development, and we may have a duplex formation more or less complete. The law of homologous union which controls these duplex organizations, making them of the same sex, joined together at the same parts, bone to bone, organ to organ, blood-vessel to blood-vessel, is no argument against the fusion of two germinal cells; it only insists upon the explanation of this law.

There is no question but that the union of the entities composing these highest duplex organizations has taken place at a very early period of embryonic life. In examining the reports of such cases, not always minutely given, or of double monsters of any variety, there is not a single instance that I know of where there has been found a separate bag of waters for each individual composing the double monster, such as is almost always the case, I believe, with ordinary twins. Cazeaux says (p. 866, Tarnier's edition) there are never two envelopes (amniotic) for a double monster. They have been reported with two

umbilical cords and two separate placentas, and with a single cord and single umbilicus and single placenta. Admitting the fact that the double monster has but a single chorion and a single amnion, it would seem, if we ventured upon the consideration of its development, to be necessary to consider the formation of these membranes and how there exists but these single ones.

They are found in the ovum itself. The chorion, the most important of the two for us to consider in this relation, and which ultimately does so much to form the placenta, is gradually developed out of the external wall of the fecundated ovum (the vitelline membrane), within which is the vitellus or yolk containing the germinal vesicle (*vesicula germinativa*), and the yolk itself (Bischoff) is converted into a secondary vesicle, the blastodermic membrane, within the substance of which, about the tenth day, appears the rudimentary embryo.

The presence of spermatozoa, singly or in numbers, has been recognized so frequently in the interior of the ovum (Meissner, Wagner, Heal, Robin,—Cazeaux, Tarnier, p. 122) that, at least, the occasional entrance of a spermatozoon must be allowed even before the ovum may have entirely left its ovarian birthplace. The spermatozoon itself, developed in a cell in the spermatid (semniferous) tubules of the male, is here found to enter again into a cell, the ovum of the female. With its entrance the germinal spot disappears (Bischoff), and the spermatozoon, according to Tarnier, undergoes a retrograde metamorphosis, and is resolved into granulations, which are mingled with the vitellus or yolk. This vitellus or yolk is now, as we may consider, endowed with unusual power; it quickly arranges itself into a granular layer, lining the inner surface of the wall of the cell or elementary chorion, and quickly develops into the germinal membrane, in the substance of which begins the formation of the new being.

Wagner (Cazeaux, Tarnier's edition, p. 92) has sometimes met with two or even more germinal spots in the ova of the mammifera. Though the fact must necessarily be more difficult to detect in the human race, from the less frequent opportunities for examination, there cannot be sufficient grounds for denying the great probability of their existence in woman. If

there exist two germinal spots or two germinal vesicles in one ovum (as can be illustrated by drawing two nucleated germinal vesicles, in the ordinary wood-cut, representing an ovum in a Graafian follicle, as figured in the text-books), we can readily admit that the spermatozoa, which enter in numbers, might effect a double conception in a single ovum, even if the existence of a bicephalous spermatozoon be not proved, and that there consequently would be but a single chorion and a single bag of waters. With this condition of development one could also understand that with a single chorion there might be one or two umbilical cords, and a single or double placenta, and yet, further, that the two embryos, formed from two germinal vesicles and developed on the same blastodermic membrane, could be united more or less completely, by a more or less adhesive junction or fusion of the two embryonic primitive grooves.

If we admit the possible fusion of two germinal vesicles, it does not seem improbable, also, that two or more fecundated ova may occasionally so coalesce as to cause a fusion of their membranes, and the union more or less complete of the corresponding primitive grooves. If this prove to be correct, we may then account, possibly, for the least complete union of the highest duplex organizations, as in the case of the Siamese Twins, Carolina Twins, Hungarian Twins, or in the closer union of Mina and Minnie, for a double body, with one umbilical cord and one placenta, or having two cords and two placentæ. At the same time, the existence of separate intelligences is recognized and explained, as the result of the fecundation and development of separate germinal vesicles.

For the lowest duplex organizations, with but one intelligence, we have only to admit, that if by the fusion of two germinal cells some one part is diminished, or is wanting in common, that it only requires a greater fusion of them to destroy a greater portion.

Bicephalic Monstrosity—Ischiopagus Tripus.

BY RALPH M. TOWNSEND, M.D., of Philadelphia.

THERE is at present on exhibition at Simpson's Museum and Menagerie in this city a pair of twins whose mode of union is remarkable, and who are rendered unique by their thriving and comparatively lengthy life.

These twins were born in Warren County, Ohio, Oct. 12th, 1870, the delivery being natural and easy, and accomplished half an hour before the arrival of the attending physician. By reference to the accompanying photograph it will be seen that these babes have a common trunk, terminating at either extremity in a well-shaped neck and head. Each end of the trunk is formed of a perfect thorax with its contained viscera, then comes the swell of the belly, and the children insensibly grade into one another. As they lie extended upon their backs they look as if two children had been cut transversely across at their umbilici, and then accurately welded together.

Exactly in the centre of their common abdomen is a scar, marking the attachment of the umbilical cord, of which there was but one, along with one placenta, and these of usual size.

Springing at right angles from the right side of the abdomen is a well-formed pelvis supporting a perfect pair of legs and feet, with the exception that one of the latter is in a condition of equino-varus. To these extremities are attached the genital apparatus and anus of an ordinary female child. Upon the opposite side of the abdomen there appears to be a rudimentary pelvis in the shape of an ilium, feeling under the skin something like a scapula. Branching from this, also at right angles to the body, is a compound rudimentary leg, its anterior aspect looking backwards, terminating in a foot containing two ossa calces and eight toes,—the great toes being outermost, and the lesser ones side by side.

When the child lies upon its belly, with its arms folded into the side and its legs extended, it is crosslike in shape,—one arm of the cross represented by the rudimentary leg being somewhat twisted and deficient. The spines, on first inspection, seem to be continuous, but closer examination shows that

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PLATE XVIII.

BICEPHALIC MONSTROSITY.

they come together like two J's with their crooks laid end to end, thus , the crooks turning towards the right and being attached to the complete pelvis.

One of these children is ruddy, muscular, and full of vigorous vitality; but the other is thin, its chest is deficient in development, and its face looks prematurely old. The mother at first nursed them both, but now gives all her milk to the smaller child, feeding the larger one from the bottle.

The father of these children is a tall, gaunt Pennsylvanian, forty-three years old, a farmer; the mother is an Ohioan, thirty-three years of age, of massive frame and heavy face. She has had three other children, all healthy, the eldest being thirteen years of age. She knows of no cause to which to ascribe the production of such strange progeny.

The pulse of these children is not uniform, beating at one examination six times faster to the minute in the arm of one child than in the arm of its companion. Their sensation is also different. One does not feel when the other is pinched; one feeds while the other sleeps; and their separate attentions are irresistibly attracted by different objects. It is the opinion of their physician, Dr. H. Besse, of Ohio, that they have separate bladders, owing to one bearing down and making water, and a few minutes after the other, with like exertion, repeating the operation. The history of these cases, however, is that they have but one bladder and one rectum.

These children were placed at the disposal of Dr. S. W. Gross, to whose courtesy I am indebted for the opportunity of making this report. They were also the subjects of a clinical lecture at the Jefferson Medical College, by Dr. F. H. Getchell, who ranked them in the order *Catadidyma*, genus *Ischiopagus*, and species *Ischiopagus Tripus*. To show how typical this child is of its class, the lecturer exhibited cuts of three similar cases, one born in Oxford, England, in 1552, one in Ceylon, many years after, and one in Cadiz, Spain, in 1818. The former two died at birth, the latter survived five days. This then is a much greater curiosity as a representative of a recognized class, all recorded cases of which have died at or soon after birth, than if it were a mere chance formation.

The history of all double monsters is, that the death of one

is immediately followed by the death of the other, and the present case seems to afford no chance for deviation from this law. At present their digestion and assimilation are good. They are visited daily by hundreds of people, and maintain rare infantile good humor in spite of the somewhat awkward handling and examining they are oftentimes subjected to. Overwhelming curiosity, however, gives way to a shade of regret on many faces, that coming years, if allowed them, can only replace present attractiveness by pitiable deformity.

Epithelioma of the Lower Lip cured by Continuous Applications of Argillaceous Earth alone.

BY ADDINELL HEWSON, M.D.,

One of the Attending Surgeons of the Pennsylvania Hospital.

I FOUND the old man, whose case is represented by the accompanying photographs, waiting in my outer office quite late in the evening of Saturday, October 28th last, whither he said he had been sent by a friend to solicit relief for the suffering which he had been enduring, for more than year, from an ulcer of the lower lip. This ulcer had all the characteristics of an epithelial cancer, and involved, with its accompanying induration, the whole of the lip, save just so much as I could cover with the pulp of my index-finger at the right corner. The ulcerated surface itself was two inches long by one inch and a quarter at its widest part, which was in the left half of the lip. The man confessed himself as an inveterate user of the pipe. His expression was one of great suffering, and he stated that the pain he endured was so constant and severe that he could not rest at night, and he desired, if I could not do anything else, that I might at least give him some relief for the pain. My experience of the past two years as to the effects of clayey earth in the relief of the pain of various forms of ulcerative action, prompted me to apply immediately some prepared clay which I had convenient in my office. This ap-

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I



II



III



IV

PLATE XIX.

EPITHELIOMA OF LIP.

plication met my anticipations, for the patient expressed himself as very materially relieved as soon as it was made to the ulcerated surface. This effect, conjoined with the lateness of the hour and the fact of its being my first interview with the patient, caused me to abstain from any expression of opinion as to the nature of the case, and the probable necessity, as it then seemed to me, for the use of the knife to make a cure; for although I had before then succeeded in healing up some small epithelial ulcers with the earth, I had not anticipated the possibility of so curing such an extensive one as this.

My mode of applying the earth in this case, I should state, was in the form of a thick paste, made by mixing some finely sifted clayey earth with water; and to retain it in place I laid over the paste a piece of blue tissue-paper. I directed the patient that, if the dressing stayed on, he need not come back to see me until the next Monday evening. On that evening he returned, with the dressing still on, and assured me that the relief of the pain had continued. I therefore renewed the dressing, and at the end of the week, and after three renewals of the earth, I was delighted to find a most positive diminution in the induration of the surrounding tissue, and an improved appearance in the ulcer itself. To prove more definitely the nature of the ulcer, I then made a microscopic examination of a portion which had been the least subjected to the action of the earth, and was fully satisfied of its cancrioid character. Some of the portion which had been most directly under the action of the earth I also examined, and found it revealed a state of things which I had frequently seen before in similar cases under the same dressing, namely, the destruction of all other than some fat cells, which were themselves robbed in a marked manner of a greater portion of their oily contents. These conditions gave me great encouragement to continue the use of the earth-dressings, and at the end of two months I had the satisfaction of not only finding all the induration surrounding the ulcer removed, but the ulcer itself reduced one-half in size.

To confirm my convictions of the nature of the trouble, I about this time (the end of December) sent the patient to my friend Dr. James Tyson, with the request that he should take

such portions of the growth as he might see fit, and, after his examination of them, communicate to me his opinion of the nature of the ulcer. The doctor's opinion fully confirmed my own.

The idea also first suggested itself to me then to preserve photographic representations of the ulcer at regular intervals of time. The first of these pictures (Fig. 1) here reproduced is that taken on the 3d day of January, the sixty-seventh day from the first application of the earth. In it can be readily seen the cicatrix then forming on the seat of that portion of the ulcer in the right side of the lip.

In the picture (Fig. 2) taken two weeks later, namely, on January 17th, the traces of this cicatrization are not only almost entirely effaced, but the portion of the ulcer, which was on the 3d of January well defined as an entity, can be seen to have become divided into two smaller ulcerated points, by the development of a perfect band of healthy epithelium across it.

In Fig. 3, from negative taken four weeks later than this, namely, on the 21st of February, and on the one hundred and seventeenth day of the treatment, there is but a trifling trace of the original ulcer to be seen. The ulcer was then but the size of the head of an ordinary glass-headed pin. The hardening of the base, which then existed for this ulcerated point, can readily be recognized in the picture.

The last picture here reproduced was taken on the 26th of April, about two weeks after all the ulcer had disappeared, and the perfectness of the cure can be readily recognized. The seat of the original ulcer was then covered by a perfectly healthy epithelial structure, and no one could suspect it of having been occupied by a cancer. Its condition is the same at the date of the writing of the statement, namely, the 18th of May.

During the whole of the treatment the patient never lost a day from his work,—that of out-door labor,—and was *entirely* free of pain from the tenth day after the first application of the earth.

No internal treatment was ever added to this local one. During the treatment the patient was frequently exhibited to the class attending my clinics at the Pennsylvania Hospital and

also examined by many of my professional friends, among whom I would specially mention Professor Gross, on account of the very great interest which he manifested in the progress of the case.

Besides the evidences observed in this case of the earth exerting a chemical action similar to what has been observed in other cases so treated, there were also those of such action being intensified or prolonged by the covering of *blue paper*. Indeed, the patient himself noticed the difference when other colored papers were used, specially those belonging to the red end of the spectrum,—which always increased the discharge, the pain, and the necessity for renewing the application, and delayed the healing.

An article of blue paper used by some of the druggists of this city in dispensing one part of the Seidlitz powders, and which has a reputation with them of preserving it effectually from damp air, proved here (as also in other cases) so valuable an adjuvant to the earth that I became quite curious to know a reason for it, and sought information on the subject of my friend Mark Willcox, Esq., of the long-established firm of J. M. Willcox & Co., paper men, and he ascertained the facts from the manufacturers themselves of the special article, that the coloring matter was the same as used in the tissue-paper which I had been employing, namely, indigo; but that the latter species of paper did not contain *any clay*, whereas the former (this Seidlitz powder paper) was more than usually charged with that substance for a paper of its character. This circumstance I have deemed worthy of mention, as it adds an unexpected and valuable proof of the earth having been the agent in the cure.

Syphilis.

BY LOUIS A. DUHRING, M.D.,

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CERTAINLY but few diseases are more distressing in their nature, development, course, and symptoms than syphilis; and taking into consideration the many phases that it is wont to assume in one part of the economy or another, and its widespread presence in the community, it should demand the attention and careful study of every practitioner. The diagnosis of this insidious disease is often attended with difficulty, more particularly at times when we are left without a clue in the history, or where we are forced to depend upon objective symptoms alone. It is for the purpose of touching on one or two points in connection with the differential diagnosis that the following case is presented. The patient, William Toland, was admitted to the Philadelphia Hospital in May, 1867, while I was Resident Physician, and came under the care of Dr. F. F. Maury, one of the surgeons of the hospital, at which time he gave the subjoined account of himself. He was twelve years of age; was born in Erie, Pennsylvania, and had always enjoyed good health until he was six years old, when he had sore eyes, attended by some discharge; but this lasted only a month, and passed off, leaving him in sound condition. When he was about ten years old, and in apparently excellent health, he was accidentally kicked violently on the nose by a man. This bruise did not heal, but some weeks after the nose became swollen and red, when it began discharging an offensive matter. About three months after this accident he noticed obstruction in the nasal passages; and one night, with an effort, he discharged from the anterior nares several pieces of bone. For some time after this event fragments of bone came away. From this date the destruction of the surrounding tissues began, attacking first the septum, then the end of the nose, and extending to the lips, cheeks, forehead, eyelids, etc. At this period there was also swelling of the knee-joints, pains in the bones, and his health failed rapidly. Such is a brief summary of the history as the

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SYPHILIS.

patient himself gave it. Let us now refer to some statements which his mother presented in reply to some questions forwarded by letter. The mother had always been healthy, and, as far as she knew, had never had any signs of venereal disease. She had had four children; one died at fifteen months of brain trouble, the other three were living and healthy, except William. The mother never had any miscarriages, and her children were all born sound. As far as she knew, the father of William never had any signs of venereal disease, and was healthy with the exception of some heart trouble. Nor, after close questioning, could any clue be obtained from the mother that there was any ground for suspecting syphilis in either parent.

When he was admitted to the hospital in 1867, the accompanying photograph was taken, which shows accurately the extent of the disease at that time. The boy was in a miserable condition, and the disease was still spreading rapidly over the face. The ulcers were deep, excavated, with sharply-defined edges, and in some cases extending down to the bone, which was bare. There was no pain, itching, or burning connected with the ulcerations except when the parts were dressed, the removal of the rags causing some pain. To the ulcers, applications of various kinds were from time to time made, to favor cicatrization. Inwardly the patient took tonics and iodide of potassium for two or three months, after which time he passed from my notice. At the present time, May, 1871, the patient is still an inmate of the Philadelphia Hospital, and his condition is very much as follows: He is now sixteen years of age, is thin and emaciated, with a poor appetite. He is subject to pains in the legs, and can predict a change in the weather by the fact of the pains coming on. The ulcerations which existed four years ago, already described and as seen in the photograph, have cicatrized to a great extent, but the ulcers about the eyelids and around the nose are still open, with but little tendency to heal. His skin over the whole body is soft, flabby, and lax, particularly so about the face. He has no control over the saliva, which flows continuously from him. He suffers no pain. Both eyes are covered with a thick, opaque deposit, and his sight in consequence is nearly gone. His condition and the treatment during the past three years I am unable to present.

Although the history before the patient's admission to the hospital, in many respects, is most unsatisfactory in assisting us to make a diagnosis, yet so characteristic are the manifestations exhibited that there can be no hesitation in pronouncing the disease to be one due to syphilis. Having decided as to the nature of the affection, it may perhaps be interesting to refer to certain points that speak for its syphilitic character, and separate it from other diseases with which it might be confounded.

The only diseases which the present case could be mistaken for are lupus and epithelioma; but if we compare these affections we shall see that though bearing certain similarities in common, they are entirely separate and distinct, the one from the other. Comparing the course of lupus with that of syphilis, we should bear in mind that lupus is a chronic disease, invading the tissues with a slow but steady pace, while syphilis, when fairly started upon its career, is the most rapid and destructive of all the eroding diseases. Lupus is years in perpetrating its mischief, while days or weeks often suffice for the virus of syphilis to do its work of destruction. The form of lupus known as "exulcerans," frequently bears a strong resemblance to certain syphilis manifestations, and it is with this variety that difficulty in diagnosis at times arises. However, when we come to investigate the ulcers of syphilis, we see that they are very different from those of lupus. Instead of the deep, sharply-defined, abruptly-edged ulcers, which we usually observe upon raising the crusts of a syphilitic sore, we find in lupus an ulceration comparatively superficial, presenting a honey-comb, exuberant appearance. In syphilis the crusts come off easily; in lupus they adhere to the surface beneath. The crusts of syphilis are thick and bulky, showing that there has been a very active process of destruction with a copious discharge and subsequent desiccation. On the other hand, the crusts of a lupus ulceration are thin, small, whitish, or mixed with blood, and of a friable consistency, easily broken.

Epithelioma also presents many appearances in common with syphilis, and demands care on the part of the diagnostician, particularly if the patient be an adult, and the diagnosis be made from the objective symptoms solely. But if we make

use of the history of our patient, points of difference in the two affections at once come up, which enable us to determine the diagnosis. Epithelioma is a disease of adult life, seldom if ever attacking children, and usually not showing itself until adult or middle age. It is, moreover, a disease of slow growth compared with syphilis, though very much more rapid in its course than lupus. Epithelioma begins in a part and confines itself to that structure, spreading in the periphery, it being a local disease so far as the appearances are concerned. Syphilis may begin its destructive action at one point, but more usually invades the tissues at several points simultaneously, and shows a tendency to diffuse itself. Such are only a few of the more prominent characteristics of these diseases, which enable us to diagnose the case before us, and view the disease in its proper light. In what manner the patient became the subject of syphilis we are unable to determine; nor are we even able to speak positively in regard to its being congenital or acquired, for here the history fails us. Space forbids us entering into discussion in reference to this latter point, but if we consider the case to be one of tardy hereditary syphilis, it at once becomes interesting on account of the complete absence of earlier manifestations. The liability of confounding this malady with other affections, the entire want of syphilitic history, the age of the patient, and the severity of the attack, all combine to give more than ordinary interest to the case.



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PLATE XXI.

POLYPI OF THE BLADDER.

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Polypi of the Bladder.

BY ERSKINE MASON, M.D.,

Surgeon to Charity and the Roosevelt Hospitals, New York.

THE accompanying photograph represents the bladder of a man, aged about fifty, who died in Charity Hospital. The patient was in a comatose state when he reached the hospital, and died eight hours after admission. Shortly before death, the house-surgeon introduced a catheter and drew off some bloody urine, which was strongly ammoniacal.

No difficulty was encountered in passing the catheter, though blood flowed freely through the instrument, and passed from the urethra after withdrawal of the catheter.

The autopsy, made thirty-six hours after death, revealed disease of the heart, pericardium, kidneys, and bladder. The pericardium was greatly distended with serum, and its surfaces covered with recent lymph. The aorta, together with its valves, was the seat of atheroma. The bladder was hypertrophied, and contained several polypi, which were bloody and of a fungoid appearance.

The largest of these polypi arose from the posterior surface of the bladder by a thin pedicle, the body of which was fimbriated and measured two inches in its longest diameter. On the right side, just above the neck, was another polypus, the size of the thumb-nail, springing from a very slender pedicle. Directly below this last-described growth, and passing across the neck of the bladder, were two distinct bands, and from the left side of the upper band arose another polypus, which dropped down into the neck of the organ, and which, together with a smaller growth from the lower band, must have acted as a bar-

rier to the flow of urine. Several small excrescences were situated in the same region.

The left kidney was very much enlarged and waxy, and its pelvis and calyces greatly distended.

The right kidney was exceedingly small, and what little kidney structure was presented was lobulated, as in the foetus; its pelvis, however, was greatly distended, and contained nearly three ounces of urine. Both ureters were enlarged, and the right distended with urine, and no communication could be discovered between it and the bladder. The prostate body was not enlarged.

Microscopical examination of these growths revealed nothing malignant in their structure. The great rarity of this form of disease renders the case interesting and deserving of a place on record.

[As will be seen, the two photographs have been arranged in the form of an ordinary stereoscopic card. The picture is viewed to greatest advantage by placing it before the stereoscope and obtaining the usual effect of the instrument.—EDS.]

Fatty Tumor.

BY JAMES GRAHAM, M.D. •

LEWIS D., æt. 68 years, a laborer, was born in Germany, and came to this country when sixteen years of age; he is in good general health, and has always been a strong, vigorous man. He has a large pendulous tumor hanging from the left dorsal region of his back; its attachment occupies a triangular space extending along the spines of the vertebræ, from the seventh cervical to the sixth dorsal, and from thence to the inner extremity of the spine of the left scapula. It is shaped like a pear, and hangs as low as the fourth lumbar vertebra. Its measurements are as follows :

Circumference at attachment	.	.	.	.	17 inches.
“ “ its largest part	.	.	.	.	28 “
Longitudinal circumference	.	.	.	.	40 “

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PLATE XXII.

FATTY TUMOR.

Its weight, measured by the spring balance, is fourteen pounds. It is firm, tense, and elastic at its lower part, but softer above, and is covered with large grayish scabs; where these have fallen off, the skin is thin and of a bright scarlet color, with several points of superficial ulceration; where it lies in contact with the back, it is free from scales and of a red color, the contiguous skin of the back being natural. He first noticed it twenty-eight years ago as a firm, hard tumor of the size of a walnut, situated at the side of the scapula. It has been free from pain until the last six or eight years, since which time he has had occasional pains shooting from it through his back and chest, especially in damp weather. It is also the seat of a heavy, dragging sensation.

Remarks.—As the patient persistently refused to submit to any operative interference, it is impossible to decide what the precise nature of this growth is. Its long standing, and the general good health of the man, preclude all question of its malignancy; and of the non-malignant growths we may weigh the probabilities between fibrous and fatty. Either of these forms may attain an enormous size, and may appear in this situation.

As to the propriety of an operation in this case there can be but little doubt, as his general condition is excellent; while as to the necessity, his comfort, happiness, and usefulness appear to be as much marred by this burden as was Bunyan's hero when he made his pilgrimage for relief. In fact, there is really more danger in non-interference than there would be in an operation for its removal. These large pendulous growths sometimes suppurate or slough, and thus endanger the patient's life; or again, the skin covering them may ulcerate, and large fungous masses protrude through it, which are more liable to profuse hemorrhage than any other form of benign growth. Mr. Paget relates the case of a woman, sixty years old, who had a large pendulous tumor in the front wall of her abdomen, suspended just below the umbilicus, and reaching half way to her knees. Its surface had a very inflamed appearance, and the separation of a slough from its posterior part gave issue to such hemorrhage as proved quickly fatal. It was a large, heavy mass attached to the sheath of the rectus, everywhere firm and

tough, except where its substance appeared to be broken by the blood issuing from numerous large vessels that traversed it.

[Since the above was written we have been informed that the patient under consideration died a few weeks ago, from some intercurrent disease. The growth was removed, and upon examination proved to be a well-marked example of the fatty tumor. Its weight, after removal, was thirteen and a half pounds.—EDS.]

Elephantiasis Græcorum.

BY A. C. W. BEECHER, M.D.,

Assistant to the Obstetrical Clinic at the Jefferson Medical College.

MR. —, æt. 26, born in the West Indies, Spanish parentage, married. His father is still living, but his mother died when he was an infant. He was nursed from the breast of a house-servant, a negress, who was unmarried, but had several children by different individuals. As far as known, she was healthy, with the exception of sores upon her feet. He had none of the diseases of early childhood, excepting measles and mumps. He enjoyed good health until he was fifteen years of age, when spots appeared upon the trunk; these were yellowish-pink in color, and very abundant, seeming to be just beneath the skin. There was neither pain nor itching in them. They remained about one year, and disappeared during a voyage to Spain. While in Spain he had an attack of neuralgia in the little finger of the left hand, running along the course of the ulnar nerve to the elbow. This was relieved, and he returned to the West Indies. Six months after this he had another attack of the same trouble, which, however, lasted only a month. In 1862 he came to this country to complete his education. Having been here about one year, he became subject to catarrhs, which would centre about his throat and cause him annoyance. Soon after this he was conscious of itching in both arms, from elbows to hands, and in legs, from thighs to feet. In 1866 his hands and feet began to swell, and this would extend no farther than the wrists and

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PLATE XXIII.

ELEPHANTIASIS GRAECORUM.

ankles, producing the sensation of stiffness and inability to move the fingers and toes. While the hands were so swollen, blebs of various sizes appeared suddenly upon the dorsum of the hands and fingers, extending over their whole length. At times he would be aroused at night with a sharp pain in hands and fingers, and in the morning would be surprised to find a large blister, which had come on through the night. These bullæ contained a whitish fluid, and upon bursting would be followed by scabs, which were dark-brown in color and transversely cracked and fissured over the joints. The tips of the fingers became involved, having similar ulcers, the nails growing over them, and breaking off when long. The feet were similarly affected. Following this eruption, he had frequent hemorrhages from the nose, coming on while in hearty laughter or in mental or physical excitement. The nose now became tender, was much swollen, and discharged matter, though not very offensive; at the same time the nose began sinking to its present condition. About a year after the first outbreak upon his hands, his face was attacked in the same manner with vesicles and ulcers. These healed slowly, and left the cicatrices, which are now visible. As rapidly as some of these sores healed, others formed; and this process has gone on until the present time.

Present Condition.—The body appears much wasted, and the skin is of a dusky hue. The hair of the body is scanty, and in many places absent altogether. The muscles of the arms are much atrophied, and small white cicatrices are visible on both arms and forearms. Upon both arms, over the olecranon process, are situated large nodules, hard and firm, reddish in color. Similar nodules exist over the patellæ. The hands are much deformed. The little finger of the right hand is contracted upon the palm, and at the same time the first phalanx is extended. The nail has fallen off, and there is ulceration of the end. The other fingers are similarly affected. The dorsum of the hand is wrinkled, hard and dry, with small tubercles scattered beneath the surface of the skin. A large ulcer exists over the styloid process of ulna. Long, irregular, black scabs cover the dorsum of the fingers, under which exist ulcers. These scabs are fissured transversely over the joints. The left hand is more deformed than the right.

Here the little finger is atrophied, and shrunken away to less than half its normal size, and is bent upon itself. Ulcers exist upon all the fingers of this hand. A point of interest is that the metacarpo-phalangeal articulation of the thumb projects inwards towards the palm, the thumb being markedly drawn over the palm. There is great impairment of function in all the fingers. Tortuosity and varicosity of the superficial veins about the wrists exist to a marked degree. The hair of the head is normal in quantity, but is hard, harsh, and straight. There is total loss of eyebrows and eyelashes. The hair about the face is thin and scanty. There is a large, hard tubercle over frontal bos, and beside it an ulcer which has existed for some time. Below the nasal bones the nose has sunken, and cicatrices exist over the entire face. Upon right side of face, over the zygoma, is an ulcer covered with a large black crust resembling rupia. The ears are very irregular in shape, and bear marks of ulceration. Many of the teeth are decayed and broken off near the gums, while the tongue is thickened, deeply furred, and the papillæ greatly enlarged. The velum palati is almost gone from ulcerative action, and yellowish-white tubercles exist in the pillars of the fauces. The larynx is much contracted by thickening of the mucous membrane. The epiglottis is about twice its normal thickness, and has several well-marked tubercles upon it, and also about its margin. The voice is much impaired; it is very limited in volume, and possesses a peculiar huskiness, though entirely free from nasal sound. Over the tendo-Achillis of both limbs are large, deep ulcers, the size of a walnut, which have a sloughing, gangrenous character. The feet resemble the hands as regards ulceration and deformity, though to a less severe extent.

Sensation is very much impaired at certain portions of the body. When touched upon the back of hand, there is only a slight appreciation, and it is referred, not to the point of contact, but somewhere in the neighborhood. The sense of pain is almost absent in the hands and forearms, but becomes gradually appreciable as the trunk is approached. Our patient can tell the difference of temperature between very hot water and ordinary water, and moreover, his whole surface is rather sensitive to change of temperature. But, again, he cannot feel the prick

of a pin, and a pin passed through the pulp of the middle finger gave not the slightest pain. Turning our patient's head away, a lighted taper was applied to one of the fingers, and though a blister and charring of the part rapidly followed, yet there was no appreciation by the sense of pain. Sensation about the trunk is almost normal. Taste and smell are impaired somewhat. Sight is quite good, though he cannot use the eyes for any length of time without pain. The general health is much better than would be supposed, considering the case. There appears to be no trace of venereal disease. Sexual powers unimpaired. He has frequent neuralgic pains shooting along the nerves in the arms and legs. General atrophy of fingers, hands, and feet is now going on, and it is appreciable from month to month, though his general health has changed but little since February last, at which time he came under my care.

The treatment has been a general supporting one with good diet. Locally he has used starch poultices, while the acid nitrate of mercury has been applied to the ulcers from time to time, as well as solutions of carbolic acid and permanganate of potassa.

Remarks.—There are two forms of leprosy admitted by all observers, being, however, but different manifestations of the same disease. These forms are the *tubercular* and *anæsthetic*. I cannot do better than quote the remarks of Dr. Bowerbank, of Kingston, Jamaica, on the characteristics of each form.

Of the tubercular, he says: "The spots, at first mere stains, become raised, often presenting a smooth, swollen, and polished aspect, and acquire a darker hue. Afterwards they lose the polished look, and become rough and tuberculated. The patches and tubercles ultimately ulcerate, forming oval sores of a whitish, sluggish look, exuding a glairy discharge. When any of the ulcers heal, they leave white, shrivelled cicatrices. There is no particular part of the body on which the disease first appears. As it advances, the eyebrows, nose, cheeks, lips, chin, ears, the hands, fingers, toes, the fauces and trachea are chiefly affected, causing frightful disfigurement, etc., with the hoarse, nasal voice, so characteristic of tubercular leprosy. From the very first appearance of the spots on the skin, the sensibility of

the affected parts is found to be diminished, and this becomes more marked as the disease advances. I have often excised large tubercles from the face and hands, which, though they bled freely, did not cause the least pain to the patient. Lepers often inflict upon themselves severe burns in cooking their food, etc., without being aware of it.

"In anæsthetic leprosy there is also a premonitory stage, indicated by pains shooting along the limbs in the course of the larger nerves, and affecting the use of certain fingers and toes, or of a hand and a foot; not mere numbness, but positive loss of power, along with loss of sensation. The muscles of the affected limb become atrophied. The fingers and toes become contracted, and flexed on the palms and soles, and gradually become permanently fixed in this position.

"The ulceration and subsequent destruction of the fingers and toes are usually preceded by the formation of large vesicles, or bullæ, which burst, discharge a glairy fluid, and become covered with a crust, or scab, on the affected part. In these cases there is no deformity or destruction of tissues, as in the tubercular disease; no ulceration about the nose, palate, or throat, etc.; but the sufferer is dejected in mind and apathetic."

It will be seen from the above description, that the present case is anæsthetic in its variety, with a combination of the tubercular element. It is a disease of warm and cold countries, and rarely seen elsewhere unless it be imported, as in our case. In our patient the disease evidently developed itself just prior to his voyage to Spain, in the appearance of the red or reddish-yellow spots upon his body. The case before us is interesting on account of its rarity in our cities, and because of the similarity of the appearances with forms of syphilis.

When I first saw the case my impressions were that the disease was syphilitic, though it seemed to me to be an unusual manifestation, especially as to the parts affected. Drs. Duhring and Bertolet, however, on seeing the case, unhesitatingly pronounced upon its leprous nature, they both having had extensive opportunities for observation of the disease in European hospitals.

Erasmus Wilson says, in his work on Skin Diseases, "The resemblance to secondary syphilis is so striking that an error is

certain, excepting on the part of those who have had the opportunity of seeing and observing leprosy." He also says, "It may be observed as a commentary on the diagnosis of elephantiasis, that there is probably no disorder in the whole category of diseases of the body so remarkable for variety of characters, a variety which entitles it to be considered as a pathological paradox."

There are some who think that leprosy is but a modification of syphilis, from climate, condition, and the peculiarities of the individual; but at the present day it is generally thought to be a separate and distinct disease. In the Report on Leprosy in the Colonies, by the Royal College of Physicians, published in London, 1867, the majority of the respondents do not consider it to be in any way connected with syphilis. The same opinion is held by the vast majority of leading dermatologists.

In its resemblance to tertiary syphilis we find a difference, in that the neuralgia of leprosy extends along the course of the larger nerves of the extremities, while in syphilis it is felt within the bones, or is periosteal.

The gradual loss of sensation in the extremities, followed by loss of motion, in many cases, is the result of interstitial deposits within the nerve sheaths, producing impairment of function and destruction of the integrity of the nerve fibrillæ. In syphilis the loss of sensation and motion is usually dependent upon intercranial difficulty.

The bullæ in leprosy are usually confined to the hands and feet, are large and irregular, and attack the patient suddenly; in syphilis they appear anywhere on the surface, and are rather small and round, coming on slowly.

The voice is usually characteristic and unattended by nasal sound, while in syphilis we have the nasal sound.

The deformities of the hands and feet are characteristic, and in no case, or rarely, do they occur in syphilis.

In conclusion, I would express my thanks to Dr. L. A. Duhring, with whose assistance the foregoing history was developed, and the case decided to be one of elephantiasis græcorum. To Dr. R. M. Bertolet I am indebted for his kindness in making the laryngoscopic examination.

Syphilitic Caries of the Skull.

BY F. F. MAURY, M.D.,

Lecturer on Venereal and Cutaneous Diseases in the Jefferson Medical College, and one of the Surgeons to the Philadelphia Hospital.

THE accompanying photograph was taken from the skull of a colored man, who was an inmate of the venereal wards of the Philadelphia Hospital. The case, both before and after death, possessed points worthy of record.

The history, gleaned from the man at the date of his admission, was extremely meagre and unsatisfactory, but nevertheless pointed without doubt to syphilis as the origin of his trouble. He stated that he was a native of Pennsylvania, a laboring man, and his supposed age about thirty-eight years. He was exceedingly dull naturally, and possessed all the attributes of the genuine African. At the time of his admission to the hospital, which was in January, 1868, I found him evidently suffering from unnatural mental hebetude, to such a degree that the idea of eliciting a clear and truthful history was abandoned after several fruitless attempts.

All that could be ascertained was that he had suffered from chancre some eight years before, the cicatrix then being evident at the under surface of the head of the penis near the frænum. Marked ganglionic involvement of the inguinal glands also co-existed with the chancre. Further than this nothing definite or reliable could be obtained. For the primary lesion he received no treatment whatever, but continued his daily duties, and in the apparent enjoyment of his usual good health. He sought medical aid (some five or six years from the appearance of the chancre) for what he supposed was a rheumatic or neuralgic affection of the head, and of some of the articulations and more superficial bones, without, however, experiencing any material relief.

When admitted to the hospital he complained of great pain, of a dull, heavy, gnawing, boring character, which occupied the entire skull, and which was always aggravated at night. The body was free from marks of any previous cutaneous lesion, and indeed no other exhibition of constitutional involvement

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PLATE XXIV.

SYPHILITIC CARIES OF SKULL.



could be found. He was placed at once upon appropriate treatment, with moderate doses of iodide of potassium. After continuing this for more than a week, with little or no effect, it was determined to increase the potassium daily, which was done with decided benefit in the way of diminishing and moderating the horrible pain suffered almost continually. At the end of three weeks he took, with marked good effect, ninety grains of the iodide of potassium daily. When going to breakfast, one morning, he fell in the ward with symptoms resembling apoplexy, and was dead in five minutes.

A *post-mortem* examination revealed the most wonderful erosive and carious inflammation of the skull, which was very much thinned and lighter than usual. The brain seemed somewhat softened, with little other appreciable change. All the other viscera were entirely free from any gummosus deposit or structural change,—a thorough examination having been made.

Remarks.—The points of interest of this case are evident. First. The entire absence of treatment of the primary sore, which in all cases, when well and promptly applied, exerts an unmistakable salutary influence over the subsequent tendencies of the disease.

Second. The peculiar elective affinity of the disease in this case for the bones of the skull to the exclusion of all the other tissues and regions,—a fact not mentioned for its rarity of occurrence, but merely from the interest it possesses. In this relation it may be of interest to state that the course of syphilis in the colored race differs very frequently, to a great extent, from that pursued in the white race. I am not prepared to state it as a broad fact, but my convictions are that cutaneous manifestations are more rare in the negro than in the white, while ganglionic involvements are more constant and common in the former. The hair is rarely lost in the colored race, while cervical adenitis oftentimes assumes alarming proportions. It is not my desire or intention here to enter at length into this obscure and delicate ground of discussion, but merely to state facts. It has been my lot to see many cases of syphilitic disease of the skull: in almost all the instances the carious form of ulceration has existed. In one instance a large necrosed piece of the frontal and parietal bone was removed. Where

interstitial ostitis occurs, the bone is eburnated and rendered much more heavy, whereas when either table is involved by erosive action, it is much lighter than natural. Where a node exists and caries results, little good, as a general rule, is experienced from any surgical interference, in the way of scraping and removing the bone; much more can be done by well-directed, judicious treatment.

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